

SCIENTIFIC TEMPERANCE  
W O R K

GREW SCHOOL, HYDE PARK, MASS.

FIFTH YEAR PUPILS



HYDE PARK  
HISTORICAL  
SOCIETY.

GIFT OF

*Fawcett,*

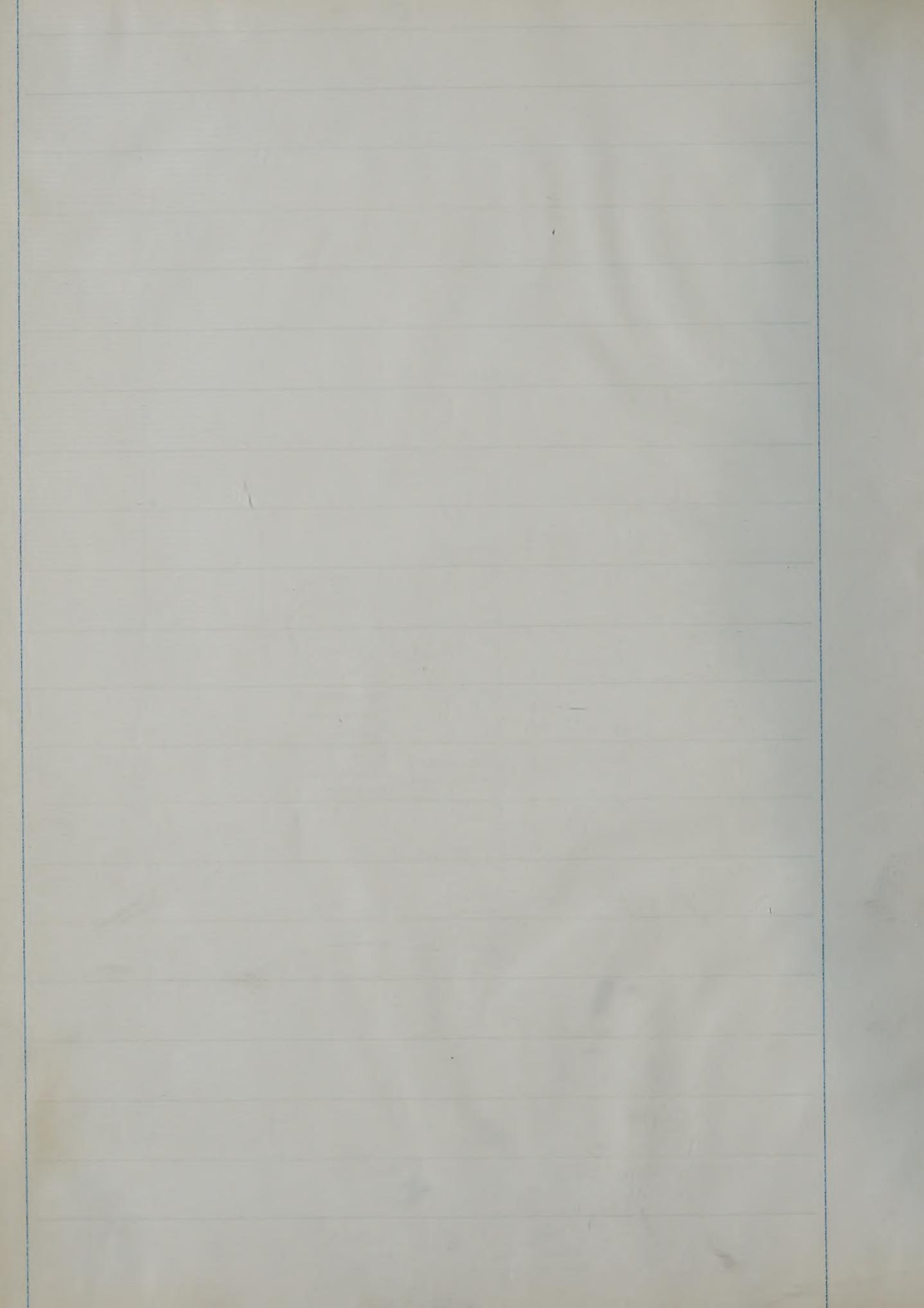
ADDED *1901*











# Scientific Temperance.

- and

## Hygiene

### New School

Hyde Park Mass.

#### Local Committee:

Mrs. Louise W. Wood. Chas. G. Chick, Esq.

Frank H. Dean. Master.

#### Assistants:

Mary A. Winslow Ada F. Whitney

Margaret A. Hanlon Fannie O. Carlton

Margaret E. Bertram Agnes J. Campbell

Blanche L. Bright Nellie M. Howes

Emma M. George Pessie C. Sparrell.

Nellie M. Parsons.



































Fifth year of study  
Digestion.

Digestion is the breaking down of the food taken into the stomach & in out of the body.

The mouth is the place that begins the work.

The first thing to do is to chew the food thoroughly.

The teeth should be brushed after each meal and before we go to bed.

They should be scrubbed with a quite coarse tooth brush and not with a fine soft one. The reason for the same reason we should not file them or make marks.

Then we have jaws of gnawing we should never bite hard on the bone and we must be careful not to bite hard on the skin when we eat the meat until the fat has been removed.



The gullet or oesophagus is made  
consisting of the mouth & the stomach.  
I have a number of my shad which was the  
which contained nothing with me to  
examine.

The stomach is a strong muscular  
bag on the left side of the abdomen.  
It takes the food and the muscular  
fibres being black and felt like that  
transmitting with the stomach juice.  
When the stomach has finished do  
over the food has become a greenish  
fluid called chyle.

The intestines is a tube twenty-five  
feet long and it into a small mass in  
the lower part of the abdomen.

The liver is the largest organ in  
the body and one of the most important.  
It is placed in the right and upper  
part of the abdomen.

In 1752 Mr. de Marlin was



shot up his left side, where the bullet  
knocked it off a few inches forward  
but covered by a piece of skin.

In this way the doctor said had charge a  
horseman who is to the right of the  
foal and the foal would do so too.

Since often now I am not  
cured on this. It

often is no worse to the animal by  
making one thrust, not a second thrust  
but a thrust for another purpose.

As soon as a bullet enters the stomach  
it is round and has a cavity so good  
that it is there it does a great deal  
harm, it weakens the muscular fibers  
and uses up the muscle tissue.

Not far from the horse and  
him than to another part of the body  
I believe they all that is usually  
yellow to green or black.

Having found these organs



steaks burns the hideous (burned  
shriveled) ground the back part of the  
abdomen.

Very serious and usually fatal  
disease called, "Bights disease" the  
bedbugs is mostly found in cattle



Edwards' Sooty Tern  
in Nest  
I found the bird sitting on the  
nest which was built on the ground  
the upper rim of the body.  
The tail feathers were  
inclined back and the mouth  
widely open.

The bird bent down into the  
nest then it joined it with the  
tip of the bill then down  
the wings to the legs and  
the bill went down  
with the wings, and went  
up and down  
the bird kept his head  
up and down on the nest  
and the bird was  
in the nest.



After a short time  
I got up and took  
a walk around the  
house & garden to the  
store.

I went to the camp late  
tonight took up the family &  
the big truck & the goods  
and started home.

I stopped at the store  
to buy some flour  
and a few other things  
then started home again.

For a few moments  
I felt I might have  
missed the boat & had  
failed to get home in  
time to help the men  
but I was so well  
entertained I didn't



~~The Stomach~~  
~~Its Functions~~  
Particulars of the preparation of  
the food which we have taken up  
to the stomach for the use of the  
body.

The body can be nourished when  
there is no food the mouth does not  
grind it.

There are three parts of glands  
one near and below the head, one  
just under the tongue and one just  
under the wind-pipe, these contain  
saliva which helps to digest the  
food.

The esophagus is the passage  
way to the stomach. Look at the  
throat of a horse and you will  
see the action of the ring shaped  
muscles.

The stomach is a strong



~~stomach bag in the left side of  
the abdomen.~~

~~The intestines is a small  
tube about twenty-five feet long  
an an adult could slip easily  
in the abdomen.~~

~~The liver is the largest and  
most important organ in the  
body.~~

~~The digested food is sent  
to all parts of the body and is  
carried into the blood.~~

~~In 1822 a man named Alphonse  
St. Martin was shot in the left  
side where the wound healed, it  
left a hole in the stomach, passing  
through a fold of meat lining.~~

~~This could be pulled aside so  
that one could look directly into the  
stomach.~~

~~By this means the doctor who~~



~~I had charge of this disease and  
about the digestion of food and  
effect of alcohol upon the stomach.~~

~~I told that we tobacco are  
almost sure to hurt sickness for  
those that are just beginning.~~

~~Known as alcohol in the  
the stomach it is found on  
with the blood-work for it can  
not be digested and it unless  
to the body, in the digesting  
time it stays there it is enough  
to cause sickness.~~

James Lee



~~Digitalis~~  
Digitalis lanigera  
Corynephora lanigera  
Lam. var. lanigera  
Lam. ex Willd.

Hedge Bindweed  
Hedge Bindweed  
Hedge Bindweed

The name is the black where  
the wood grows it, or otherwise  
it is a more legible name  
we called it in, for our own  
so that this will do if you  
have good just  
after the name and the  
leaves number 10  
which has a small  
name of the flower  
decay the leaves in the







digested his food  
and he was not  
feeling well, he had  
difficulty in breathing  
the following day.

In 1822 a man named  
Wells of Marion county  
Indiana died, after this it was  
noticed that children began  
to die at the same time.  
After the death of this man  
the next summer, it was noticed  
that children and dogs  
had died before this  
man died. Dr. C.  
Clegg, a doctor and  
his wife a teacher  
to have distributed  
the news.

The news quickly spread



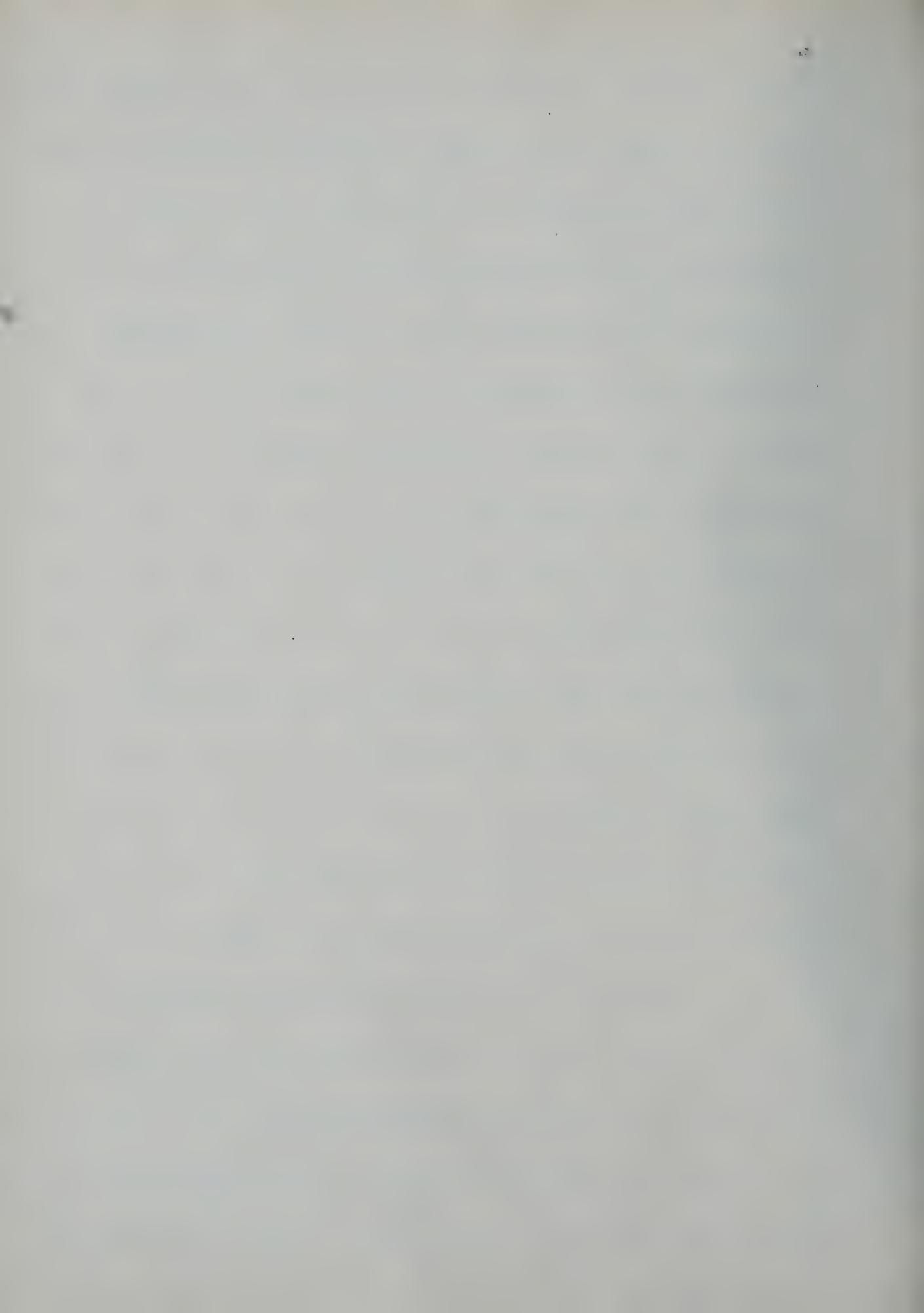








I am now in the 2<sup>d</sup> month  
of my confinement and am  
still very weak & ill  
and having lost much  
weight during my last  
month, I expect another day or  
two more of rest will do me good.  
I have been able to do up  
the children's clothes & wash  
them off & wash them again  
but it will be a week  
or two before I get up. Will you  
please let me know when you  
will be home. Your son,  
Dr. B. A. Richardson



flow and it does not let the food  
pass through the body well. If you  
feel well it causes sickness,  
nausea, and tongue, furnish  
heat, and a very bad breath.

I'll speak with the physician

and get your opinion.

It's a good idea to have  
the doctor examine you all over  
and see what he thinks about it.

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## Fifth year of study

### Digestion

Digestion is the process of preparing food for the use of the body.

The organs of digestion are the mouth, oesophagus, stomach, intestines and liver. We take the food in our mouth and chew it.

The food mixes with the saliva in the mouth and passes through the oesophagus the passage way to the stomach.

The stomach is a strong muscular bag, there are many glands in the inner lining.

When the food is taken into the stomach some parts are ready for use. These are taken up by the small blood vessels carried to the



to the liver and then to the heart.

When the stomach has done its work, the food is a greyish mass called chyme. This chyme now passes to intestine. The glands of the intestine are helped by two glands which lie in the abdomen.

These send through a small tube the bile and pancreatic juice which divide and prepare the fat. When digested it is called chyle. As soon as alcohol enters the stomach it is hurried on to the blood vessels.

It cannot pass through the walls of the stomach without water. It therefore absorbs the water from the walls of the stomach and makes them thick and yellow, thus hinders digestion and makes the food unfit for the body.



Tobacco seriously interfere with  
digestion.

In 1821. A Mr St. Martin was  
shot in his left side. When it healed  
it left a hole in his stomach, through  
which one could look. The doctor  
who had charge of him died much  
in this way.

Giara Bureck.



## Fifth year of study

### Digestion

Digestion is the preparation of the food which has been taken into the stomach, for the use of the body.

The food is first put into the mouth and chewed and mixed with a liquid called saliva. Then the food passes down the esophagus to the stomach where it mixes with a juice called gastric juice. Then it passes into the intestines and liver, where it is helped to be digested. After the food goes through the intestines and liver, it goes through the veins and arteries and becomes part of the blood, and is taken all over the body.

The use of the teeth is to chew the food.

We must not bite hard things or crack nuts with the teeth, and must brush them every time after eating.



The salivary glands are the glands which hold the saliva.

The ring shaped muscles of the oesophagus helps to swallow the food.

The stomach is a muscular bag. It is quite large; its uses is to hold and help digest the food.

The gastric juice is to make the food moist.

The intestines are a long tube coiled up in the stomach, their work is to carry off the bad matter from the body.

The liver is the largest organ of the body.

Alex St Martin was shot in his left side in 1822. When the bullet hit it left a hole in his side so one could look in his stomach.

The doctor in charge of him learned a great deal about digestion in this way.



Tobacco makes the organs of the body weak.

Alcohol injures the organs of the body.

None of them are



## Fifth Year of Study Digestion.

Digestion is the preparation of the food which is taken into the stomach for the use of the body.

The mouth, esophagus, stomach, intestines and liver are the organs of digestion.

To keep the teeth well we ought to clean them before and after every meal.

The esophagus is a tube that is made of very thick muscles, when you put the food into your mouth



it goes into the oesophagus and gently on to the stomach.

The stomach is a muscular bag in the left side of the abdomen.

In this stomach is a gastric juice which helps to digest the food.

The liver is the largest organ in the body; it is in the upper and right side of the abdomen. One part of its work is to secrete the bile or gall.

A man named Alex Martin was



shot in his left side,  
and when the wound  
healed it left a  
hole so that you  
could see right in  
to his stomach and  
the doctor that  
took care of him  
concerned much ab-  
out the effect of  
alcohol on the St-  
omach.

Tobacco interferes  
with digestion.

Alcohol interferes  
with digestion.

Ernest Hillard



Symptoms.

Swelling is the expression of what will be introduced into the body.

Food taken into the mouth and into the body of the teeth, the tongue and the oral part, you should push out of the teeth, & should push them away well, & hold over like them with a fine bit with a wooden stick, & the mouth will open wide & allow that you find the mouth.

Other types of which we found on our way took the form of a sharp point, the tongue, and on fine points the lower jaw, which without swells the mouth.

The other types is made up of a sharp needle with a bent part, & it pushes the food onward to the



stomach.

This is a strong muscular organ which digests the food.

The inner lining of the stomach which separates from the muscular wall of the stomach is called mucus, in this is a substance called pepsin which denatures the flesh making it fit for food.

It now then passes into the intestine which are carried over about into the lower part of the abdomen. The intestine finishes its portion of the body and is now a very muscular and is ready to become blood.

It is now sent to the liver where it is made up and then it passes through the thin walls of the arteries and is sent to all parts of the body.

The liver is the largest organ in the body and one of the most important. It takes the waste of the intestine after side of the abdomen.



drink, a man would think  
nothing, and let it pass off, but then  
the wind had got into his bowels in his  
stomach, & if he did not get rid of  
the water quickly, it will be passed  
out, so that one will be sent directly  
into the stomach.

With rains, the doctors say, heat  
comes along, caused much more the  
digestion of food, and the heat of which  
warms the stomach.

After harding tissue making worse,  
and sending them from the body the  
heat, which causes the water to  
be passing the bowel.

Coated with the body of the stomach  
it, hinders the flow of the gastric juice,  
and, in this manner, greatly interferes  
with digestion.



~~Experiments~~  
~~Observations~~

On the 1<sup>st</sup> of October I took a specimen of the *Leucostoma* from the surface of the body of the fish. The fish was taken from the mouth of the river *Guadalupe* at the village of *San Juan de los Lagos*, in the state of Jalisco, and was about 100 centimeters long. It was found to contain a large number of *Leucostoma*.

The specimen was taken from the body of the fish, and it was found to contain a large number of *Leucostoma*. The body of the fish was about 100 centimeters long. It was found to contain a large number of *Leucostoma*, which were distributed throughout the body of the fish.



to inspect the boats at the wharf.  
The wagons were all loaded  
and the teams at the different stages  
in the city and the boats  
which had all filled the tables  
to right and left were sent off  
aboard. The point of the vessel  
was to secure the horses with  
a rope.

In 1822 a man named Elias  
Harris who was left ad  
vised the owners to load it so  
that it would burst by  
yield of the inner lining. he would  
refuse to do so, so that we could  
not easily enter the vessel.

The boat which had charge of  
him, caused much about his capture  
of foot, and the effect of alcohol  
on the body of being men



and of the two individuals, the  
largest was collected and the other  
was retained in the stomach.  
It was buried in sand at Fort Fisher,  
so the animal has not been seen  
or dissected, and is either in the body  
of the very stout live alligator,  
or completely digested.

The following is the account  
of some studies of the stomach  
and respiratory tract of those who are  
just beginning to use the tobacco. It  
enforces the taking of the tobacco  
in the regulation of the body.

Little Brown



Fifth Year of Study  
Digestion.

Digestion is the preparation of the food which has been taken into the stomach for the use of the body.

We put the food into the mouth and the teeth grind it up and it mixes with the saliva and goes into the stomach. The front teeth are used in biting the food and the back teeth are used in chewing it. We must clean our teeth after each meal.

There are three pairs of glands one on the back of the ear and under the tongue and one in the inside cheek. The one in the cheek is very small and the saliva moistens the food.

The teeth divide the food and when we swallow it goes into the oesophagus and from the oesophagus into the stomach. Food and drink do not simply slide down the oesophagus.



a horse often bends his head so much he  
thinks is that his mouth is really lower  
than his stomach.

The stomach is a strong muscular bag  
in the left side of the abdomen.

In 1822 a man named Alexis St. Martin  
was shot in his left side. When the wound  
healed, it left a hole in his stomach, partly  
closed by a fold of the inner lining.  
This could be pushed aside, so that one  
could look directly into the stomach, the  
doctor who had care of him learned much  
about digestion and the effect of alcohol  
and tobacco on the body.

Alcohol and tobacco interfere with  
the process of digestion.

Hale L. Jewell



Fifth Year of Study.  
Digestion.

Digestion - is the preparation of the food which has been taken into the stomach for the use of the body.

The food enters the mouth, and the teeth grind it. We should brush them after every meal, we should never use them for biting thread and cracking nuts. The salivary glands are so called because they hold the saliva, when you put the food in your mouth it mixes with saliva and it changes the starch into sugar.

When the food is changed by the saliva the food is ready to be swallowed or sent into the esophagus, the passage



way to the stomach.

The stomach is a muscular bag in the left side of the abdomen. In the gastric juice is a substance called pepsin which digests the flesh making parts of our food.

The liver is the most important and the largest organ of the body. It is in the right and upper side of the abdomen. Its work is to secrete the bile or gall used in digestion.

In 1822, a man named Alexis St. Martin, was shot in his left side. When he healed it left a hole in his side, partly closed by a fold of skin lining. This could be pushed aside, so



that one could look right into the stomach. By this means, the doctor who had charge of him, learned much about digestion of the food, and the effects of alcohol upon the stomach.

It is said that the nicotine in tobacco is almost sure to cause sickness of the stomach in those who are just beginning to use it.

Dr. Richardson says "One who smokes a pipe is very likely to have dyspepsia".

It is said that the disease of the liver affects the whole body. More alcohol goes to the liver and brain than to any other part of the body.

Luis Higgins.



Fifth lesson of Chemistry.

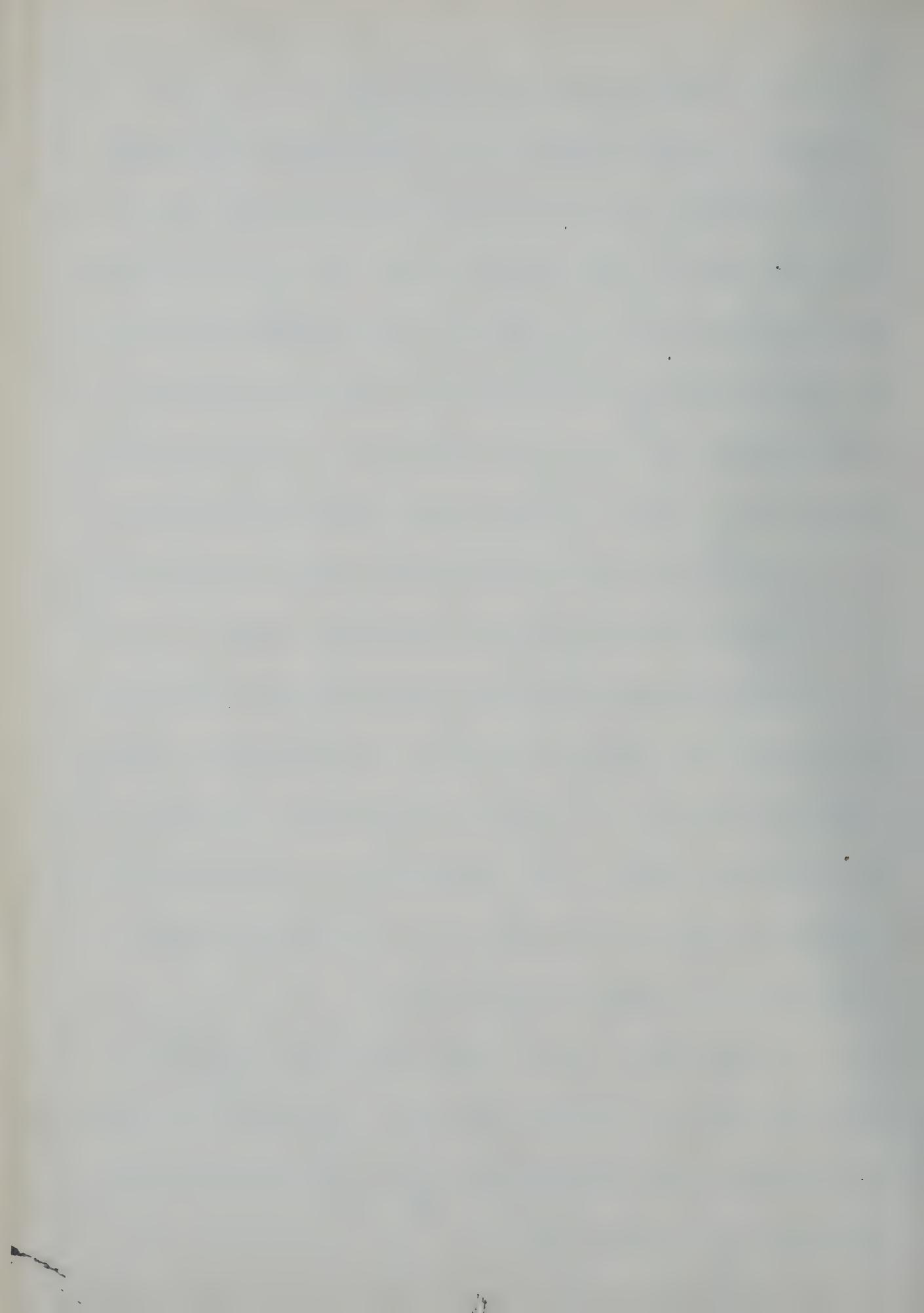
## Origin and Nature of Fermented Drinks.

When grape or apple juice is left in a warm place, the sugar in the juice turns to carbonic acid. It begins to bubble and it is fermenting. The carbonic acid escapes and alcohol is left under the foam. It is called wine or cider. There is a little alcohol in it.

There are little ferments and when they get into the juice, they keep multiplying. They are so small that you cannot see them with a naked eye. If you look through a strong microscope, you can see them. When the apples are pressed the ferments go into the juice. They come from skins and skins of fruit.

Alcohol is a colorless liquid. It is lighter than water, and burns without smoke, and has a stinging taste. It cannot be frozen.

Vinegar fermentation is changing the



sugar into alcohol. Then it changes to a strong liquid called vinegar.

If grain is left in a warm damp place till it sprouts, the starch turns into sugar. They dry the juice and press it. Then it is malt. Beer and ale are made from malt.

To make bread ferment you put yeast and water in it, and then the sugar and starch turn to alcohol and carbonic acid. The carbonic acid tries to escape, but the dough keeps it back, and it keeps rising. When it is put in the oven, the alcohol and carbonic acid escapes.

Bread is good because it has no alcohol in it, and beer has a little alcohol in it.

When you get a little alcohol you want more and more until you form a habit, and this is called an appetite.

Wine or brandy should not be used



to flavor food, because you want more and  
more and might want something worse.

Jane Polls.



## With You is to tell Origin and Nature of Alcohol or Drink.

When the juice of apples, grapes, or any other fruits, is left standing in the sun, it will soon begin to ferment, having little bubbles at the top of the juice as if it were boiling.

There are small living forms in the air, that you can notice with the naked eye, and they get into the juice and form carbonic acid.

They are called ferment. They come from the stems and skins of fruits.

Alcohol is a colorless liquid, and has a strong



taste. It looks like beer, and has a strong smell; it will not freeze, and it will never end dissolve yeast.

Vinegar fermentation is the change of sugar to alcohol and carbonic acid.

If an cider is left standing in a warm place the alcohol that is in the cider turns to vinegar. This is called acetous fermentation.

If grain is left standing in a damp warm place it will soon begin to sprout and then the sugar turns to wine. After that they dry and press out the juice of the grain; after that the juice is called "wass". They make beer and ale out



of malt.

Ground beet is made into bread by putting in water, sugar, and yeast is put in. Then let the dough stay in a warm place and the carbage and puff it up.

The difference between beer and bread is that the beer is made of grain, and the alcohol takes in the yeast while the bread is made of flour and the alcohol that is in the bread escapes when it is in the oven.

You can generally tell a beer drinker by his fat and healthy look, but his muscles are so fat that he cannot work very well. His molar are generally red.



Liquors can be distilled by putting wine, and alcohol mixed with water into a coffee pot. Then have the pot on the stove; and a fish or a cake of ice, aged a little pipe running from the pot to the dish, so as to see which of the alcohol, or water will turn to vapour escape the first. The alcohol escapes the first. Then it goes from the pot through the pipe and into the dish. Whisky, rum, and brandy are made so.

Distilled liquors are more harmful than beer or wine because there is more alcohol in them.

The appetite for alcohol



the habit of taking some  
until you want more and  
in larger doses; but when  
you have enough food you  
do not want any more.

Wine or brandy should  
not be used in flavoring  
food because it forces the  
taste for more.

Anna McConaughay



Fifth Year of Study.  
Origin and Nature of Alcoholic  
Drinks.

When the juice of apples, grapes or any other fruits, is set in the sun, the heat makes it bubble. The juice turns into carbonic acid and alcohol, and we say it ferments. Between the foam and the carbonic acid are wine, beer or cider. There are little germs in the air, that you cannot see unless you have a strong microscope. When you leave things uncovered, these germs get in and ferment them. They come from stems and skins of fruits.

Alcohol is a colorless liquid. It is lighter than water and has a blue flame and will



burn without soot. It has a stinging taste, and looks like water. If you took a glass of water it would not hurt you, but if you took a glass of alcohol it would.

Vinous fermentation is the change of sugar to alcohol and carbonic acid. If the cider is left in a warm place, it ferments again and the alcohol turns to an acid. This change is called acetic fermentation.

If grain is left in a damp, warm place it sprouts and the starch turns to sugar. They dry it and press it. The grain has been turned to malt and it ferments, and they make beer and ale out of it.



Grain is made into flour  
and the yeast is put into water  
and then in the bread. The  
yeast ferments the bread and  
makes the carbonic acid and al-  
cohol. When it is in the oven  
the carbonic acid passes off and  
then it is good to eat.

You have to ferment the  
grain to make beer, and you  
have to ferment flour to make  
bread. When you are taking  
the bread the carbonic acid  
passes off, but it stays in the  
beer.

You can tell when a man  
or woman has been drinking  
by the red face and nose. Though  
they are blushing and look health-  
y, it is doing them harm.

If you put wine or



alcohol mixed with water on a hot stove in a coffee pot so it will almost boil, and fasten a pipe to the sprout, the vapor will pass off through the pipe. In this way they make brandy, gin, and whiskey.

Distilled liquors are more harmful than beer or wine, because there is more alcohol in them.

When you take some cider or beer, and a little more and then take stronger drink till you don't know when you have enough. But when you sit down to your dinner and eat it, you are satisfied and do not want any more until the next meal comes.

Brandy, or wine should



not be used w<sup>th</sup> any kind of  
food. If a man had been  
drinking and then left off  
taking any and then should  
taste some food with liquor in  
it it might bring back his  
appetite for it.

Elliott G. Willim



Fifth Year of School.

## Origin and Nature of Fermented Drinks

The juice of apples, grapes, and other fruits, if left in a warm place, will turn to alcohol and carbonic acid. This change is called fermentation.

There are living forms so small that they cannot be seen with the naked eye, but you have to look at them with a microscope.

These living forms come from the stems and skins of fruits, and meet & fly together and make the juice ferment.

Alcohol is a colorless liquid, and burns without smoke.

You know fermentation is the sugar turning to alcohol, and



~~carbonic acid~~

If acids is left in a warm  
in it will turn to vinegar,  
this is called acetic fermentation.

This is starch in grain, and  
if left in a warm place it will  
spoil and the starch will  
turn to sugar. The grain is pressed  
and this malt is made into  
ale or beer.

Flour is made from grain  
and it makes bread of flour by  
adding yeast and water.

It makes the bread ferment,  
but the alcohol does not stay  
in it but turns to vapor when  
the bread is baked.

If a man breathes bad air  
it would be fused with the body,  
and his heart will beat  
as well as if he did not bark.



It makes him painful but  
this is bad flat.

Water and alcohol are  
to get , and then you heat  
run into a coffee pot and put  
a tube into the most and heat  
it then vapor will pass through  
the tube and this is to add to it  
This is called distilling Rum  
or whiskey and now we made  
in this way.

If you shall drink a little  
beer that was not very strong  
you would keep wanting  
stronger and stronger, till you  
formed a habit.

If you shall have ready  
when you feel bad to give you  
a sufficient for strong rum  
But that bring whiskey



# Fifth Year of Study

## Origin and Nature of Alcoholic Drinks.

When the juices of pears, apples, and grapes, are left in a warm place, they bubble as though they were boiling on the stove. After the carbonic acid leaves the juice, the alcohol is left, and it is made into wine, beer, and cider.

The juice ferments, and the sugar changes to alcohol and carbonic acid. The ferments come from stems and skins of fruit. They are so small that they can not be seen by the naked eye. When the apples are crushed, the ferments get in with the juice.

Alcohol is a colorless liquid



and it has a stinging taste. It is lighter than water and can not freeze. It burns without soot, and gives great heat.

Vinous fermentation is the change of sugar into alcohol and carbonic acid. If cider is left in a warm place, it changes to an acid called vinegar. This process is called acetous fermentation.

If grain is left in a warm, damp place, it sprouts and the starch turns into sugar. The grain is dried and crushed. After it is crushed it is made into malt.

Yeast is put into the bread, and during the night it makes the dough rise. The heat of the oven drives the alcohol out of



the bread, but the alcohol stays in the beer.

People that drink beer are not so healthy as those that do not drink beer. The beer drinkers look strong and healthy but it is nothing but poor fat that makes them look so.

If you put wine in a coffee pot, and put a tube in the nozzle, and set a jar on a piece of ice, a moisture comes from the tube called vapor. The vapor comes out of the coffee-pot through the tube into the jar. The cold from the ice changes the vapor into a liquid. Rum, gin, whiskey, and brandy are made in this way. This process is called distillation.

Distilled liquors are more



harmful than wine and beer,  
because they have more alcohol  
in them.

When a person begins to  
drink alcohol, he takes a little  
first, and by and by he wants  
a larger dose and stronger than  
before. He keeps on taking larger  
and stronger doses, until he can  
not keep from drinking.

Many people put wine and  
other alcoholic liquors in cooked  
foods, which is dangerous, often  
causing people to get in the hab-  
it of drinking.

Ralph Simpson.



Fifth Year of Study  
Origin and Nature of Fermentation

When you let a pickle juice stand in the heat, there are two or three changes that take place. The sun causes a cool heat in the juice begins to bubble and make for the air the top.

These are little living forms that are in the air, so tiny tiny that they cannot be seen by the naked eye. These are called ferment. They are what yet into the juice and make it bubble.

Beneath the froth will all rot down and will make a keecker. This change is called fermentation. These ferment are in the stems of fruit before they are ground. If you are not careful with the white



juice or the ferment will get in and keep multiplying until it gets full then its ferment.

Alcohol is a colorless liquid. It has a strong taste, burns without soot, and gives great heat. It is lighter than water and can not be frozen.

Vinous fermentation is the change of sugar to alcohol and carbonic acid. When you make cider or any other liquor it must be shut up tight or these ferment will get in and ferment it and then change to vinegar. This is called acetic fermentation.

I heard you make beer by putting yeast which ferments, and you put in yeast in bread, but in the bread the alcohol stays. Then the bread is in the oven the alcohol passes off. There is no alcohol in bread because it evaporates and the



gas passes off in the heat.

If you put some fermented liquor in to a big kettle and heat it over a lamp and not have it boil so the liquor would boil. Put a long tube in the mouth of the kettle. Then take a bottle and put the bottle on a cushion of ice. Take the other end of the tube and put it in the bottle. This is the way to distill liquor.

If this pipe is of the right length, and uncooled, there after while passing through will turn to a liquid and drip from the end of the tube. If you take a match and light it, this catches well fire and gives the flame.

Some of the most common distilled liquors are rum, whiskey, and gin. Some druggists sell whiskey and other intoxicating



drunk to people and this is one of  
the most dangerous ways to teach  
people to drink.

Then you can't control it, if you  
take meat so you keep overeating  
more until you get into a habit and  
can't get out of it. But when you eat  
your meal you take just the much  
and that all you want. Then when  
the next meal comes you eat just  
the same.

You should not take alcohol  
to flavor your food, because there  
is danger of giving an appetite for  
alcohol.

Sydney F. Wood



Fifth Year of Study.  
Origin and nature of  
Alcoholic drinks.

When you put apple or grape juice in a warm place, in a little while it will begin to bubble, and look as if it were boiling. The carbonic acid makes it bubble. When the carbonic acid has escaped, it leaves the alcohol, and this change is called fermentation. Little things called ferment get into the juice. When these ferment get into the juice, they keep multiplying till there are so many that they turn the sugar into the poisonous alcohol. These ferment



come off of the stems and  
stems of fruits.

Alcohol is a colorless  
liquid, and is lighter  
than water, and can not  
be frozen.

Vinous fermentation is  
changing the sugar to  
carbonic acid and alcohol.  
Acidous fermentation is  
changing the alcohol to  
an acid, and the cider to  
vinegar.

Grains are made into  
beer and ale by leaving  
them in a warm damp  
place, till they sprout.  
Then the starch will  
change to sugar. After  
this is done, they dry  
and press it, and then



is malt. After that they make the beer and ale.

After you have put the yeast in the bread, and it has risen you put it in to bake. The alcohol is driven out by the heat. But alcohol stays in beer.

You can tell a beer drinker by the red in his face, and is most always fat, which makes him look healthy but he is not.

You could distill some liquor, by putting some alcohol and wine in a coffee pot. Now there is water mixed in with the alcohol. Fasten a rubber tube to the nose of coffee pot, and have the tube go to a bottle.



on a piece of ice. Set the pot on the stove. The alcohol will pass out in vapor into the bottle on the ice, and will turn into pure alcohol again.

Whiskey, brandy, and gin are distilled liquors. Distilled liquors are more poisonous because there is more alcohol in them.

When you drink a little alcohol, you will want more and more till you will have an awful life. When you eat some food and have had enough you will not want any more, till you are hungry again.



Wine and brandy  
should not be used for  
flavoring food, because  
there is alcohol in them,  
which will make you  
have an appetite.

Waldo Dodge



# Fifth Year of Study

## Origin and Nature of Alcoholic Drinks.

If you let the juice of grapes, apples, or any other fruits, stand in a warm place, the heat will change the sugar to carbonic acid and alcohol, and it will boil and bubble. This is called fermentation. It is made into cider, beer, wine, gin, and brandy. The change is caused by the little ferments, that are in the juice, and grow larger every minute. They are little living forms. These ferments come from the stems and skins of fruit.

Alcohol is a colorless liquid. It burns without soot, and gives great heat, but little light. It is lighter than water, and has a stinging taste. It has a blue flame, and cannot be frozen.

Vinous fermentation is the sugar



changing to alcohol and carbonic acid. If cider is left in a warm place, the alcohol will change to an acid and the cider will turn to vinegar. This is called acetous fermentation.

Grains have a great deal of starch in them, and if left in a moist place the grain sprouts and then the starch turns to sugar. After it is dry, they make it into malt. They make beer and ale out of the malt.

To make bread ferment, you have to put in yeast. There is alcohol and carbonic acid, and the carbonic acid makes little bubbles in the bread. The alcohol in the bread is driven out by the heat, when the bread is baking.

A man who drinks beer is not so healthy as if he didn't drink any. You can tell that he has been drinking because his face and nose are red.



The beer makes him look plump and healthy, but he is not.

If you want to distill wine, put it into something that looks like a coffee-pot with a tube in it. When it begins to get warm, the steam passes out through the tube, and if you set it on a cake of ice, the vapor will turn to alcohol again.

Brandy, gin, rum, and whiskey are made in this way.

The distilled liquors have more alcohol in them, than beer or wine. If you drink a little alcohol, your appetite for it would grow stronger, and when you eat your meals you get enough, and don't want any more.

If you should begin to put brandy and wine into any food, for flavors, you would want stronger the next time, and it would make you form an appetite.

Edith Moody



Fifth Year of Study  
Origin and Nature of Alcoholic  
Drinks

When the juice of apples, or grapes stands in a warm place, the juice bubbles up. These bubbles are carbonic acid. After the carbonic acid escapes there is alcohol left. Ferments are small forms in the air, so small that you can not see them with the naked eye. They get into the juice and keep growing more and more. They come from the juice and stems of fruit. They press the juice out and the ferments get into the juice. They turn the sugar to alcohol and carbonic acid.

Alcohol is a colorless liquid. It is lighter than water, and cannot be frozen. It has a stinging taste.

Yeast fermentation is changing



the sugar to carbonic acid and alcohol.  
If cider is left in a warm place, it  
changes into an acid called vinegar.  
This fermentation is called acetous  
fermentation.

If grain is left in a warm, damp  
place, the starch in the grain turns  
to sugar, by sprouting. Then it is crushed  
to get the moisture out, and to kill  
the sprouts, and malt is left. From  
malt beer and ale are made.

Bread is fermented by putting yeast,  
and water into it. The alcohol in the  
bread is driven out by the heat when  
the bread is baking. The alcohol stays  
in the beer.

A person who drinks beer is not  
healthy. The beer makes him look plump  
and fat. Beer makes fat around the  
heart, so it can not work so well.

Liquor may be distilled by putting



cider and water in a coffee pot, with a tube in the spout, and heating it. Then if you want to change the vapor to alcohol, you put it on a cake of ice in a bottle. Brandy, whiskey, gin, and rum, are made in this way. These liquors are more harmful than beer or wine because there is more alcohol in them.

If a person drinks a little alcohol, it makes him want more and stronger liquors, and we call this an appetite. When you eat your meals you have enough and do not want more as you do of alcohol.

You should not put wine or brandy in food, because it will give you an appetite for alcoholic liquors.

Lillie Baessler.



5th Year of Study.

Origin and Nature of Alcoholic Drinks.

If the juice of grapes, apples, and pears is left in the sun, the sugar turns to alcohol, and the little bubbles come out and leave a foam on the top under the foam is wine or cider.

When the juice of fruit is left in the air, the little ferments get into it and make it work.

Alcohol is a colorless liquid lighter than water and burns without flame or soot, giving great heat, you can not freeze it.

Vinous fermentation is the change of sugar to alcohol and carbonic acid.

If you should leave some cider in a warm place the alcohol would be vinegar. That is acetous fermentation.

When the grain is left in a damp warm place, it sprouts and the starch is turned to sugar and we make malt from malt is made beer and ale.



To make bread we add yeast and water  
the bread is set in a warm place. The  
yeast keeps coming out and the bread is  
left spongey. When the bread is left in a  
oven the alcohol keeps coming out until  
it is all dried up.

The difference between beer and bread  
when the bread is put in the oven the alcohol  
goes off and the beer has alcohol in it.

A man that drinks is not so healthy  
as a man that does not drink you  
can always can tell that a man drinks  
by his red nose and red face a man that  
drinks fat grows around the hart and  
he can not work so hard.

If you should put some wine in a  
coffee pot the vapor would be pure alcohol  
from alcohol is made whiskey, brandy, and  
rum,

Distilled liquors are more harmful  
than beer or wine because there is more alcohol



in them.

If a man should drink any beer, he would want more and more and stronger and stronger that is the appetite for liquors.

When you eat your meals you stop when you get enough.

People should not put wine in food as it might lead them to drink.

Rena Dawson.



Fifth year of study

## Origin and nature of alcoholic drinks

When the juice of apples, grapes and other fruits are left in a vessel the juice will turn to alcohol and carbonic acid; after the carbonic acid escapes it is called cider or wine.

The yeasts are found on the skins of fruit.

If the juice is left in a warm place the yeasts get in it and begin multiplying and they make the sugar turn to alcohol and carbonic acid.

Alcohol is a colorless liquid and burns without smoke. It gives great heat.

Alcoholic fermentation is the change of sugar to alcohol and carbonic acid.

Fermentation changes sugar to



alcohol.

If you add beer grain to a  
steaming wort before it boils it would  
turn to starch. Since the starch would  
turn to sugar then they would  
dry up all the juice and mess it up  
if then added malt. Hops and yeast  
are added at the end of the  
boiling process.

The alcohol stays in beer more easily  
than in bread. Then the bread is  
cooked the heat drives it out the  
alcohol and the bread is good to  
eat and the beer is not safe to  
drink.

If a man drinks beer he grows  
fat, but the fat is not healthy. His  
facial hair would be a problem if  
he ate too much.

If you should get a beer after  
a cold sweat and then it heats up and



just a tube into it and then we  
would have to open it and  
another dish once again just the  
other end of the tube in it. Then  
the water would go into the dish it  
is alcohol. In this way you can  
drink beer and gin are small.

There is more alcohol in  
distilled liquor than beer or wine  
I am.

Like you get the taste of  
alcohol you won't more and  
more and it is called an appetite  
Then you get full so you get enough  
for a time.

Other people just come on  
drinking in food, you eat fast  
it will like it but there is no  
need to do any harm.

Hanniball Bailey



## Fifth Year of Study

### Origin and Nature of Alcoholic Drinks

When the juice of apples, grapes or any other kind of fruit is left in a warm place, the heat will make it bubble as if boiling. While this is going on the carbonic acid is escaping, which leaves alcohol and water. This change is called fermentation.

If you look at some stagnant water under a strong microscope, you will see little living creatures which cannot live without fermentation. They are in the air also, and are called ferment. If you have a piece of fruit standing, these ferment get into it, and change the sugar to alcohol.

Alcohol is a colorless liquid, burning without smoke. It gives off a light and gentle heat. It cannot be frozen, and is lighter than water. It is used to dissolve gums and resins, and to take out root, and barks.



material for making jams and jellies.

Fermentation always changes sugar to alcohol and carbonic acid.

In the juice of very fresh apples there is a certain amount of alcohol which has been fermented. As soon as the juice of apples when it is exposed to the air, the alcohol in it will be taken away.

This change is called ~~acti~~ fermentation.

A beer-drinking man almost always has a red nose and face, and he looks plump and healthy. He is not as he looks for there is something wrong—the muscles become fat, and make fat within the heart so that it cannot work properly. This gives a false appearance.

Wine, cider, and beer are dangerous drinks because of the alcohol in them, which is a poison.

Starch forms a large part of barley,



size, and it grows; and if the rain  
is kept away from it, it will  
well enough to weigh. But when it  
wants it shrivels. Then it is hard to start  
it growing again. Then it is water just  
enough to turn all the young root. When the  
hol huk can be called alkohol. Peleole,  
and beer are made of it. Sometimes it  
is not enough to turn the ground a  
little, and is called dark earth. Now and  
then dark colored bricks are made of this.

When a person takes alcohol he  
wants more and more each time he looks  
at it, but when a person takes food he does not  
want more each time he looks at it, because  
there is no alcohol in it.

Alcohol should not be used for  
flavoring food because it is injurious to  
the health.

Blauer Marquess Davis



Year of Study.  
Origin and Nature of Fermentation  
Drinks.

When you put the juice of apples or grapes in a warm place, in a little while you will see bubbles on the top as if it were boiling. The sugar is turning to alcohol and carbonic acid. It has fermented and some odor is made.

The change is caused by bacteria. The grapes stand without a cover over them, and the little ferment get in. We are enclosing things, so well that they can not be seen with the naked eye. In order to see them you have to have a strong microscope.

I found it in the juice they will change the sugar into alcohol and carbonic acid. They are



will burn no other than it's self, and  
when the wine is distilled they get  
ethyl alcohol.

It is a colorless liquor which  
burns without smoke, and gives off  
little flame and great heat, and can  
not be frozen. It is lighter than  
water.

Ones fermentation is when the  
sugar changes to alcohol and  
carbonic acid. If you put it in a  
warm place, it will burn to in oxid  
and this water is vinegar. This is  
called carbonus fermentation.

If you put grain in a dump,  
over time it will soon begin to  
sprout, and the stalk sprouts to sugar.  
Then they dry the grain out, just  
out the stalks. The stalks fermenting  
and you can make beer or ale, for this  
there is alcohol and we need that as



more. If you put liquor in a teapot and heat it too high it comes out, and is a total fail. They make you, brandy, rum, and whisky etc.

Distilled liquors are more harmful than beer or wine because they have more alcohol in them.

If you put wine or whisky in something for flavoring you always want it, and you get an appetite for it.

Peter Valley



Fill your bottle.  
Draw your water up.  
So you should have the part of  
the bottle you will be  
using filled up. The bottle will be  
extremely full.

Now fill a saucer and place it  
in the sun to warm up, which  
will do well.

Now hold the lighter to the wick  
and pull out pieces, You can take  
as much or as little as you  
can't water.

Water fermentation is the change  
of sugar & alcohol into carbonic acid.  
Water fermentation is the change  
of alcohol & other substances to oxygen  
which is made water and  
which gives the water its  
own oxygen.

This is made of yeast after



The wine and beer will be  
the best you can find, & in the  
celebration of either, you will be well  
pleased by the taste.

Well, now the time has  
arrived when you will want  
the beer, so you drink the beer and  
drink with it.

I wish that I had a  
dozen bottles of beer for you to  
make them fit round the round  
table, always full a few minutes with  
beer and you will.

Now, here are some more  
drinking tips, and if you follow  
these, nothing can, I am sure, go  
wrong. The more that you will be  
in this way are beer, cider, whisky,  
rum, ale, brandy, and wine.

If you should take a cup  
of cider you would want more cider



and then you would want something  
stronger, and so on, and be a drunkard,  
and be so that you could not stop it,  
many of thousand of gallons are drunk  
every year.

Wine and brandy are not for  
flavoring because it has to much  
alcohol in it, Cider is sometime used  
for cooking and other things.

If alcohol is left in a warm  
place it will ferment, and looks as if  
it were boiling, The carbonic acid is  
try. g. to get out, That is called fermentation

Lewis Comstock.

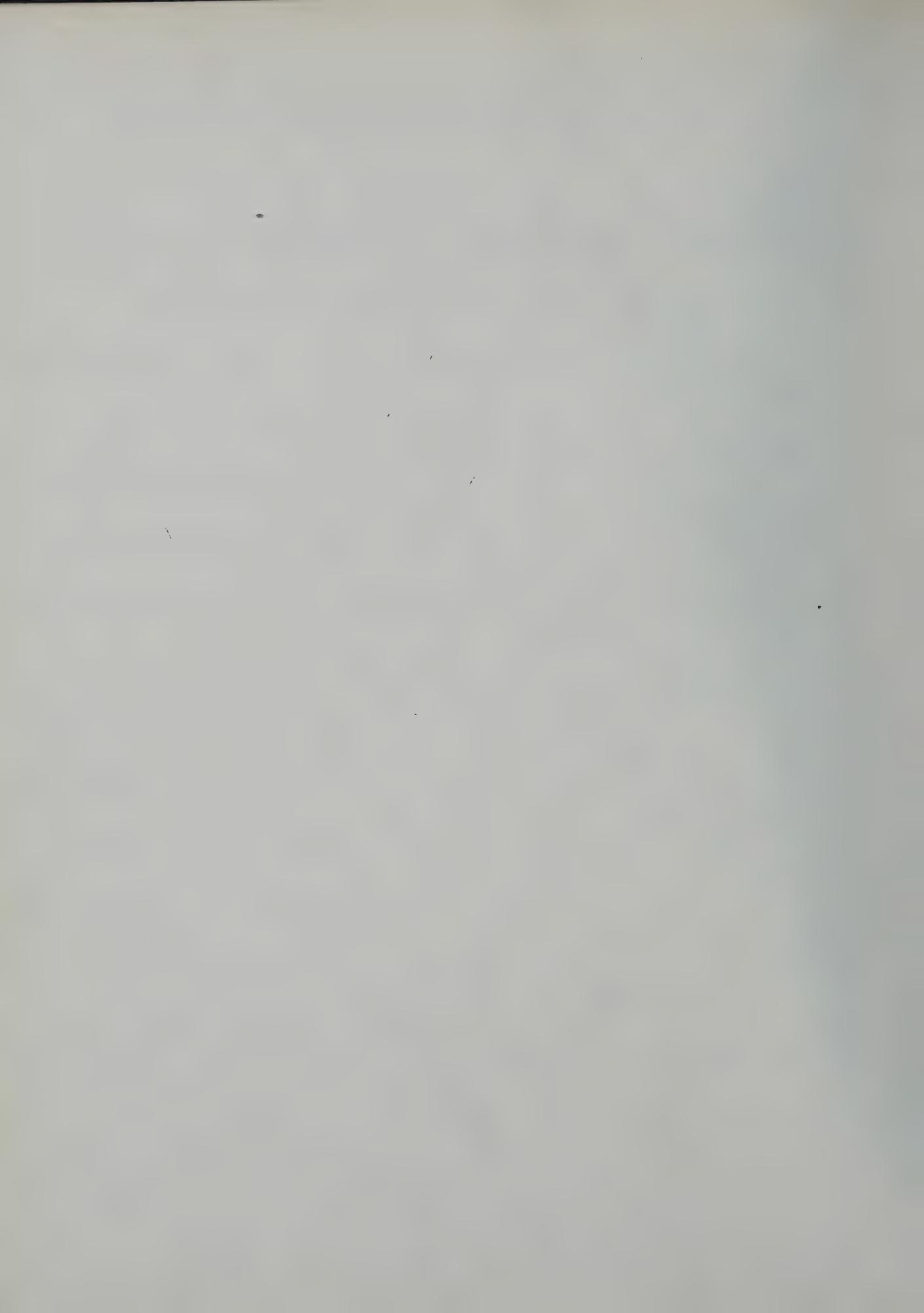


# Fifth Year of Study.

## Origin and Nature of Sleoholia Drinks.

When the juice of apples is left in a warm place it will bubble up as follows. The carbonic acid makes its way through. The ferment change the sugar to carbonic acid and alcohol, and this is called fermentation.

If the juice of apples is left in a warm damp place without covering it, the little ferment will get on and make it ferment. This forms also small hard bodies called ferment. When alcohol is added they come on the skins and stems of fruit.



Methyl is a colorless liquid. It burns without smoke giving little light, but great heat. It burns with a blue flame. It is thinner than water and cannot freeze. It is used for making perfumes and medicines.

If grain is left in a warm damp place it will sprout. The starch is turned to sugar. Then they dry it and it is malt. They make beer and from it

When bread ferments you put yeast in it and then it rises and is all full of holes. In these holes there are carbonic acid and alcohol.



alcohol. When the bread is baking, the alcohol is driven out by the heat. It stays in the beer.

The person who drinks beer looks fat and healthy and looks red in his face. But the fat is not good for him.

If a man drinks beer at one time, the next time he would want more, and stronger doses, until he has no appetite.

But if you eat a good meal at one time you would not want any more or stronger doses right off.

You should not use any kind of alcohol for



flavering food, for it  
may give a man an  
appetite for drinking.

Robert Sandgreen



Fifth Year of Study  
Origin and Culture of  
American Drunks

When the pieces of apples,  
grapes, &c. are put in a warm  
place, they begin to bubble.  
They are to be called vines  
through them and turns  
it to cider, and wine.

A little wine may be collected  
when it is to get in the juice.  
This ferment and burn the  
skins of fruit. This will  
multipliy and that changes  
the juice to alcohol.

Alcohol is a colorless  
liquid and burns without  
smell. It has a strong  
taste and cannot be found.  
Oxidation is



~~W. J. R. I have written to Mr. C. W. C. and asked him to let us sail on a voyage from the Atlantic Puffin Islands except the ship turned to meadow. This will be a great consolation.~~

~~The grass is left in a very damp place, the soft shoots and turns the land to mud. They think the country is good and it is right. They make out of the well and all.~~

~~When you make bread, you put yeast, flour, and water in it and put it in a warm place.~~

~~After we had been in the ocean the above wind blew to get out, and it raked the floor full up,~~



and the moonlight. After  
the wind whistled the next  
hot wall driven west by  
the heat of the sun.

You can tell a bear drunk  
by his red face and nose.  
The more the bear drinks the  
fatter his muscles get, very fat and  
this hinders him and weakens  
the heart beat slower.

Water always has to be  
put with spirit to make it  
change to carbonic acid  
and alcohol.

If you put rum and water  
in a cold bottle and put a  
towel at the nose, and a  
cake of ice under it, it  
will have to form alcohol.  
Never comes out of the bottle  
and the heat caused by alcohol



This is will be bring  
the tree if we make  
what he, Sam and you.

I think signs are  
more dangerous than these,  
because they have more  
abuse in them.

When you begin to drink  
water, you will want some  
thing stronger, and by doing  
this, you may form an  
affection

Peter Stockwell



Chlorobutanol

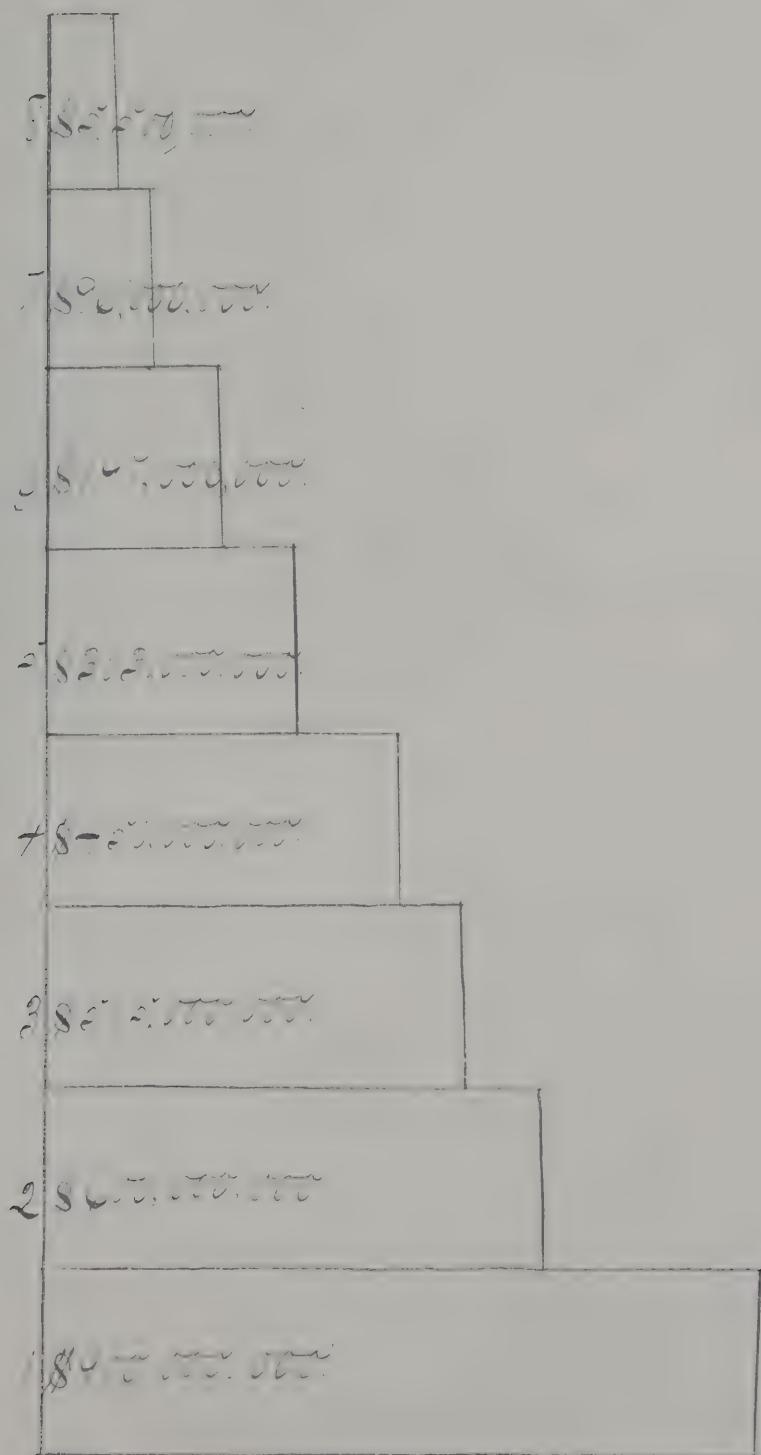


Chlorobutanol

Chlorobutanol  
Butanol

For disinfection of instruments  
to terminate each session of dental  
procedures.















8 Sečený m.

789. třídu

68. výročí

2 Sečený m.

787. třídu

28. výročí

28. výročí

28. výročí







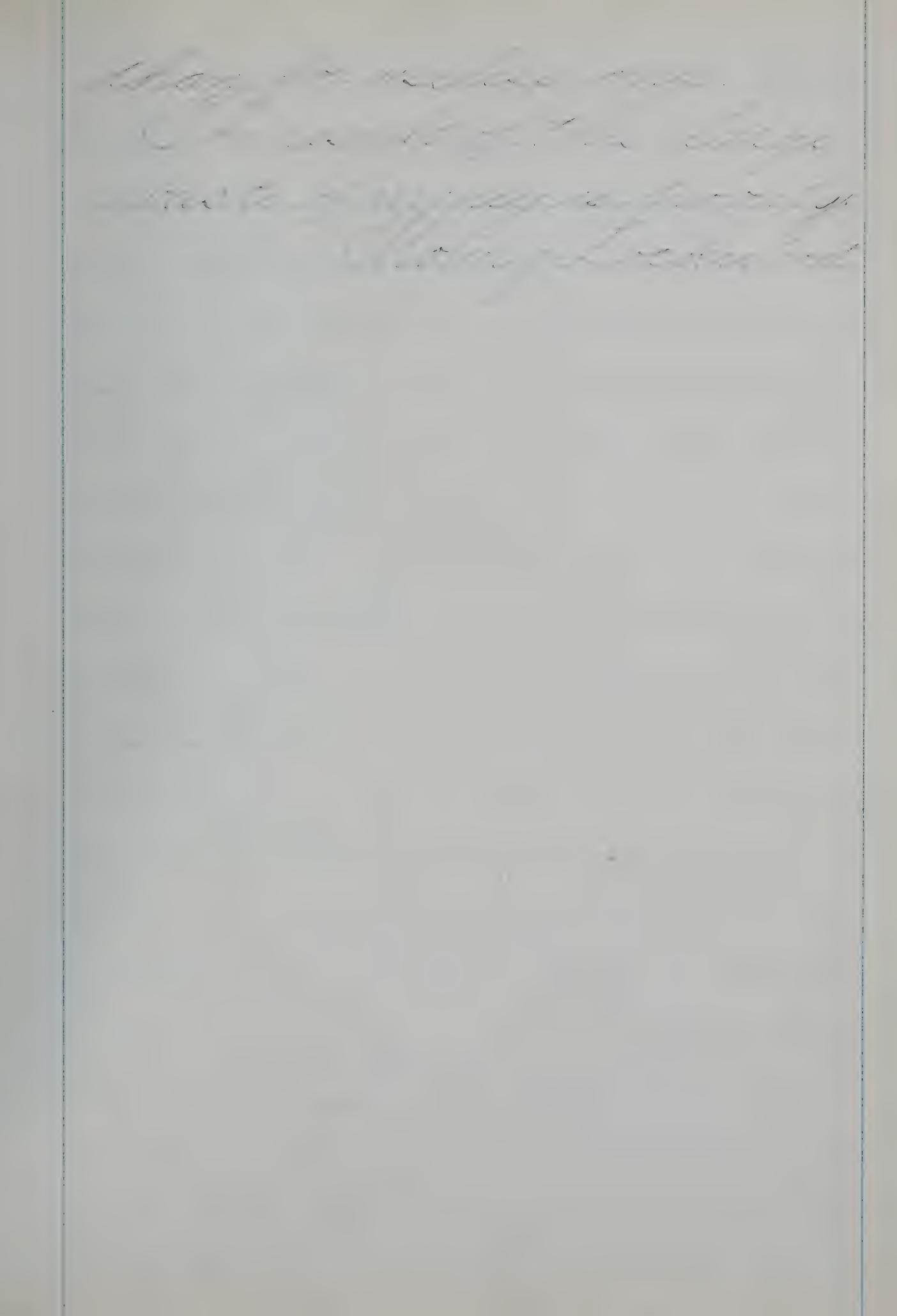
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7	Sep 21, 1902
8	Sep 22, 1902
9	Sep 23, 1902
10	Sep 24, 1902
11	Sep 25, 1902
12	Sep 26, 1902



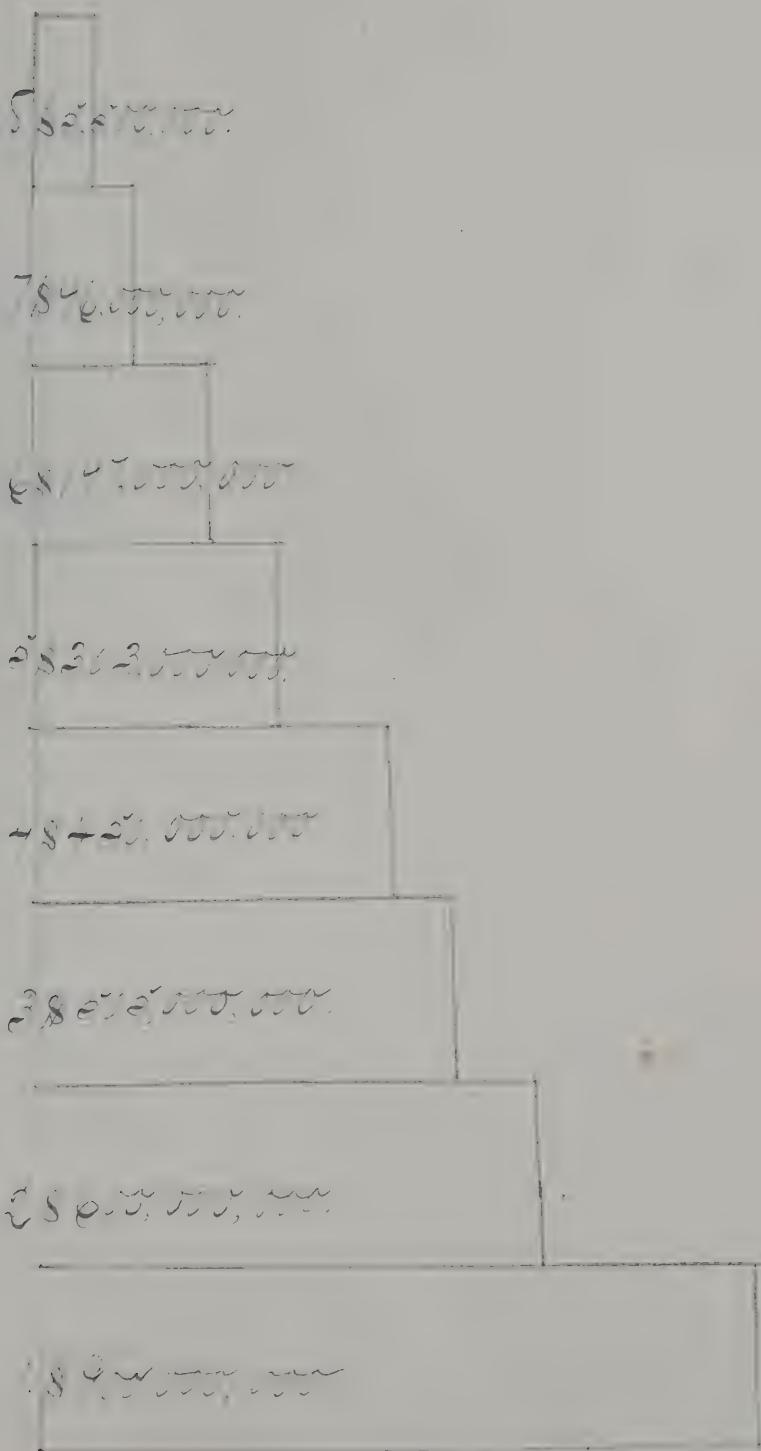
Experiments  
I have tried  
the same with the  
water, may I speak to  
you and tell you what  
I want to ask.  
I will make the  
same observations  
as before, but I do  
not want to do  
more. I just want  
to know whether  
there is any  
difference between  
the two methods  
which are  
(A) and (B).  
The ones which are  
good (A).

I will make the  
same observations  
for medical articles











## Explanation of Diagram.

The first part of the diagram is to show how much money is spent for useless articles and how much for useful ones.

No. 1 shows how much money is spent: (1) for liquors; (2) for tobacco; (3) for bread; (4) for cotton & wool; (5) for meat; (6) for books & shoes; (7) for public education; (8) for home and foreign missions.

The useful ones are all except (1), and (2).

The useless ones are (1), and (2).

About fifty-six million dollars more is spent for useless articles than for tobacco and liquors.

The result of this large waste of money is poverty.

James Lee.



	\$ 2.00
2	\$ 2.00
3	\$ 2.00
2	\$ 2.00
1	\$ 2.00



## Expenditure of Money

The amount of the expenditure  
is given at each country is  
spent by some vehicle and  
how much for each vehicle.

The following is the amount money  
is spent for (1) for signs; (2) for tobacco;  
(3) for horses; (4) for drivers & carts;  
(5) for meat; (6) for boots and shoes;  
(7) for public decoration; (8) for lime  
and for iron articles.

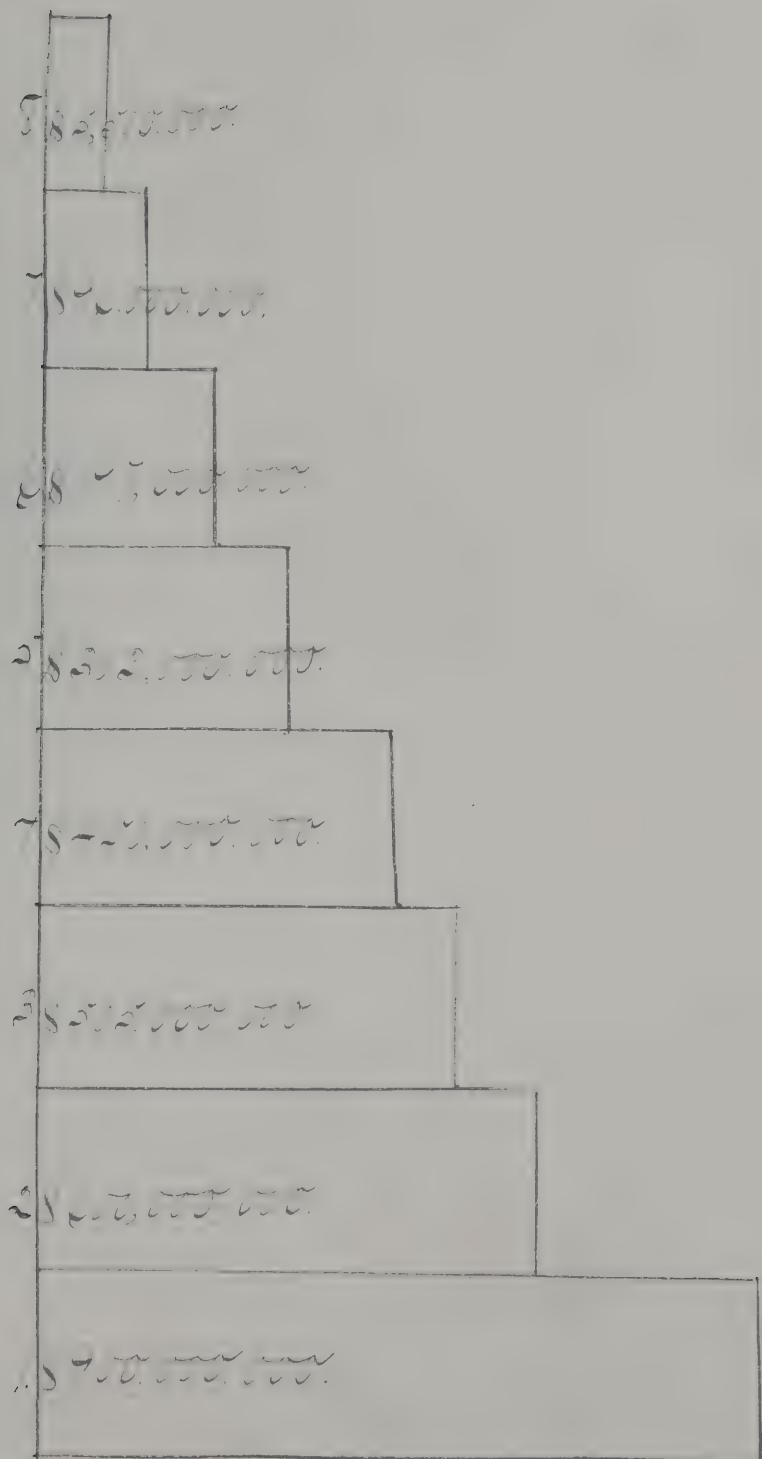
The total amount is  
(1) and (2).

The total amount is about \$10  
thousand fifty-six million  
which more is spent for  
motor vehicles than for signs  
and tobacco.

The result of this large  
sum of money is poverty.

Thomas Gilson

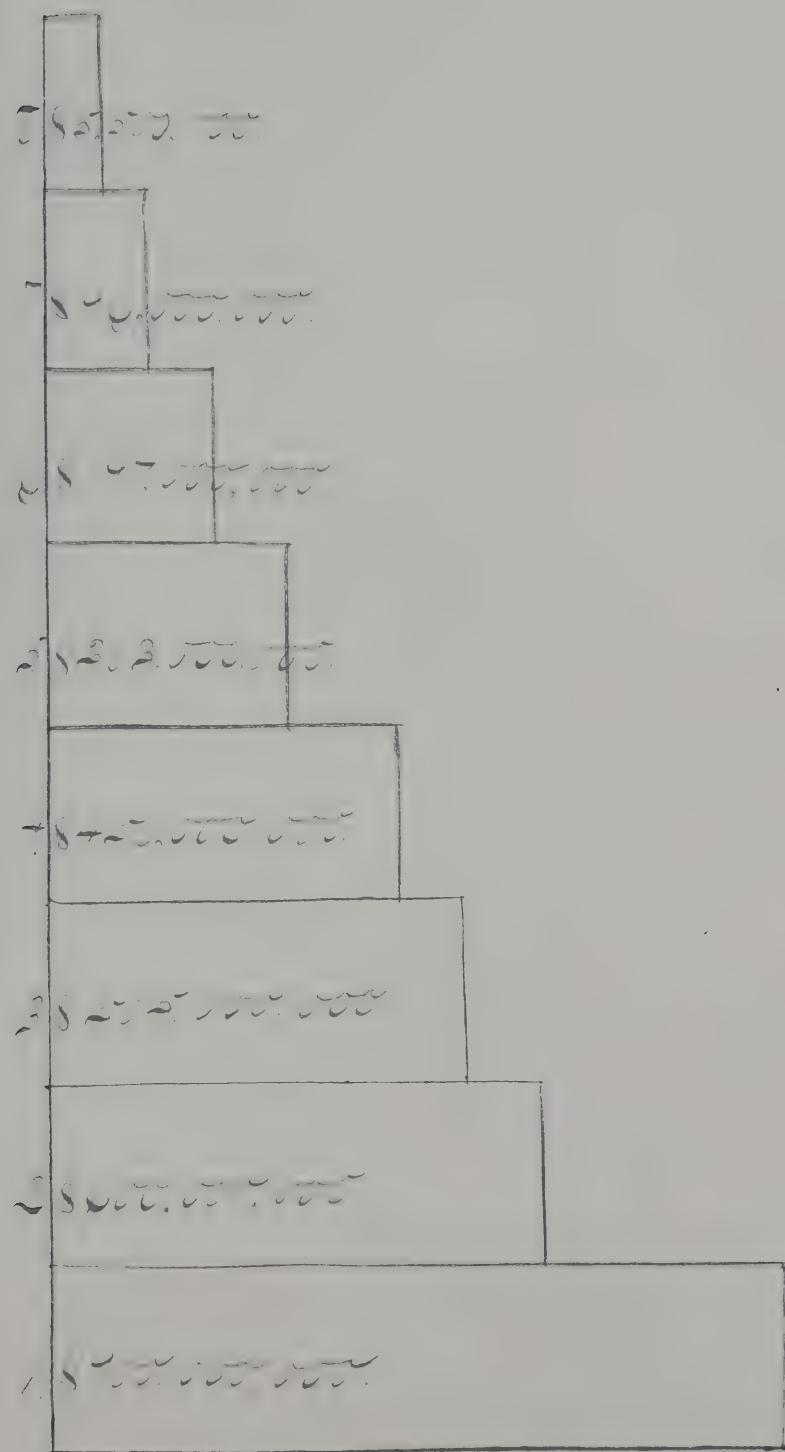














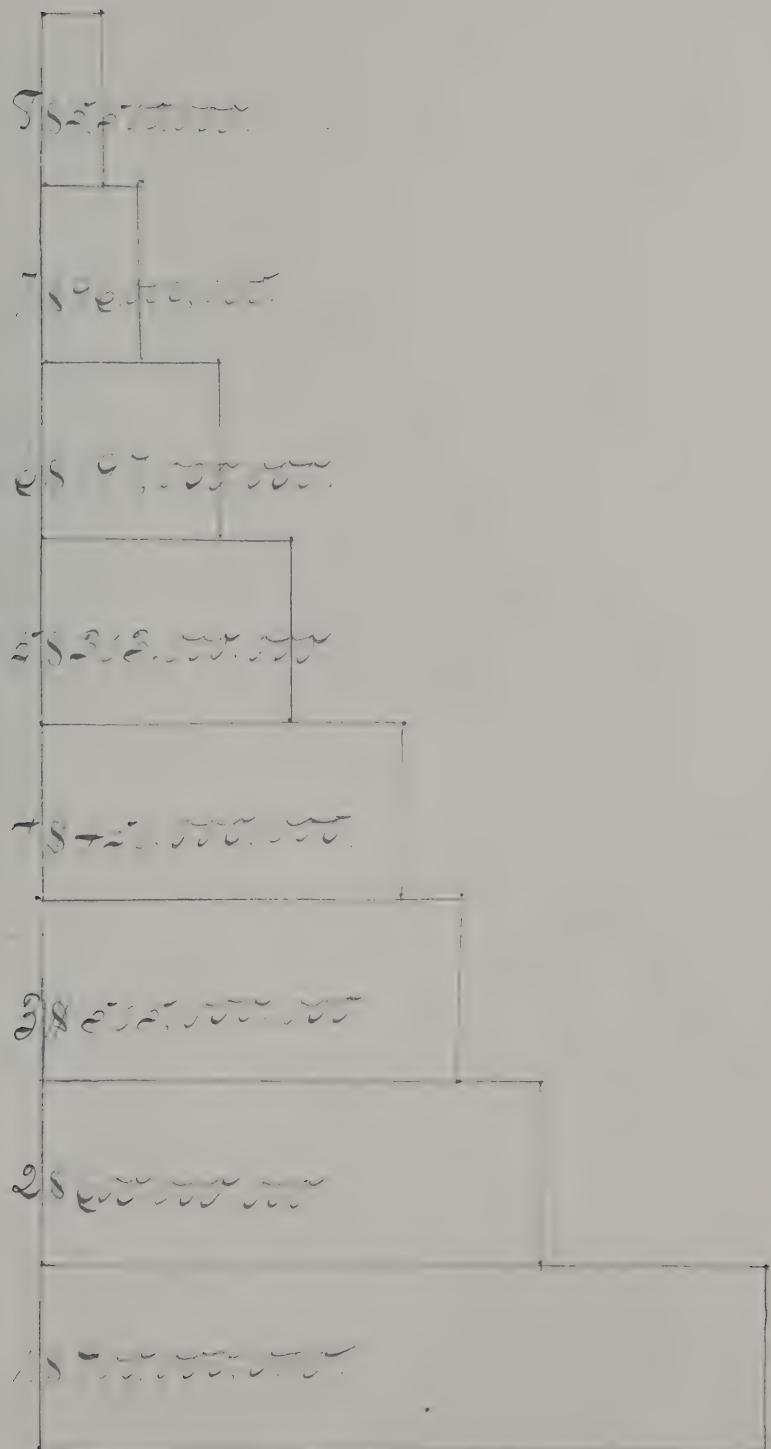
Opposite to Lagoon.

Midway to the Ridge - 273

Half mile N.W. of the Ridge

Half mile S.E. of the Ridge







## Explanation of Diagram

The purpose of the diagram is to show how much money is spent for useful articles and for useless ones.

No. (1) represents the amount of money spent for liquor; (2) for tobacco; (3) for bread; (4) for cotton & wool; (5) for meat; (6) for boots & shoes; (7) for higher education; (8) for home & foreign missions.

All but (1) and (2) are useful.

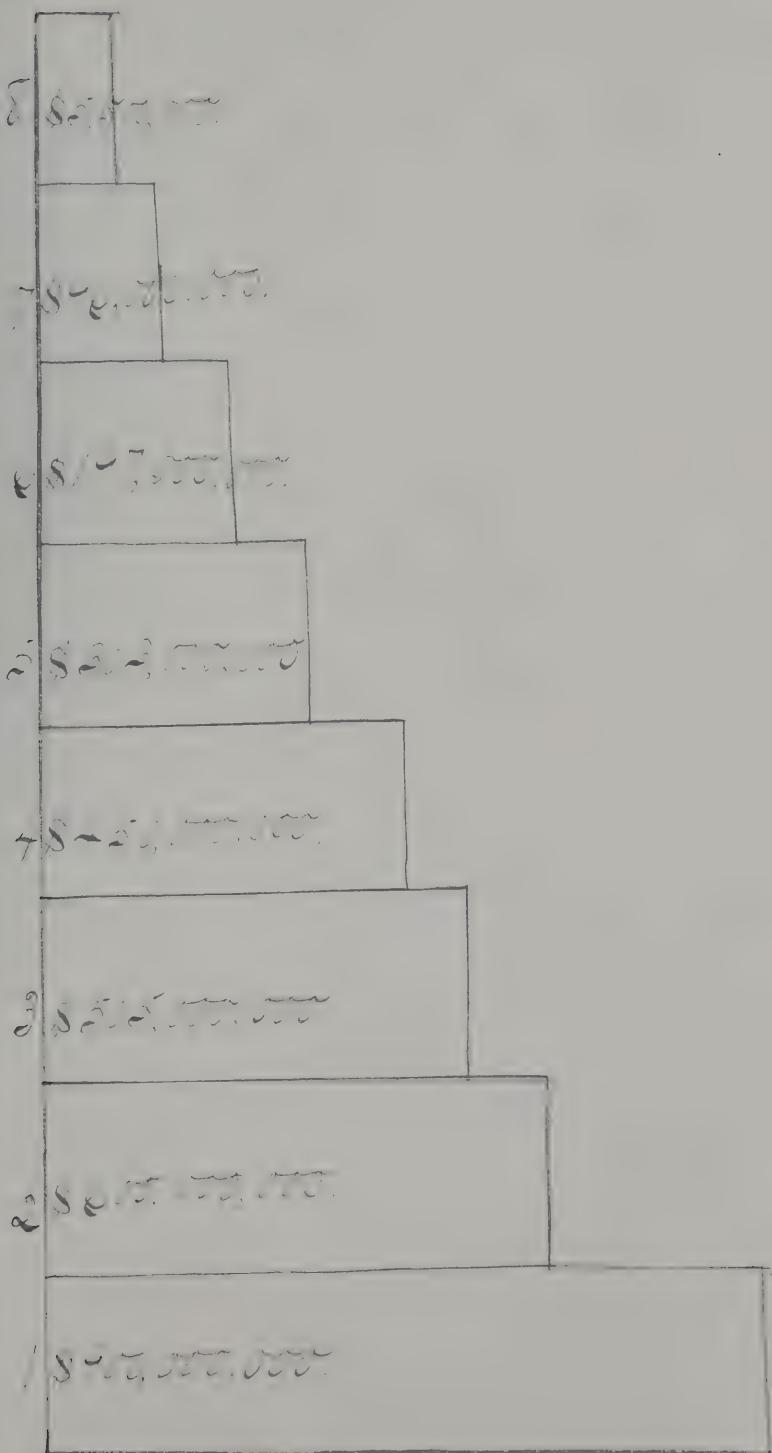
(1) and (2) are useless.

About fifty-six million dollars more is spent for useful articles than for useless ones.

• Poverty is the result of the large waste of money.

Suey Sherman.







## Explanation of Diagram.

The purpose of this diagram is to show how much money is spent for needful articles and how much is spent for tobacco and liquor. No (1) represents the amount of money spent for liquor; (2) for tobacco; (3) for bread; (4) for cotton and wool; (5) for meat; (6) for boots and shoes; (7) for public education; (8) for home and foreign missions.

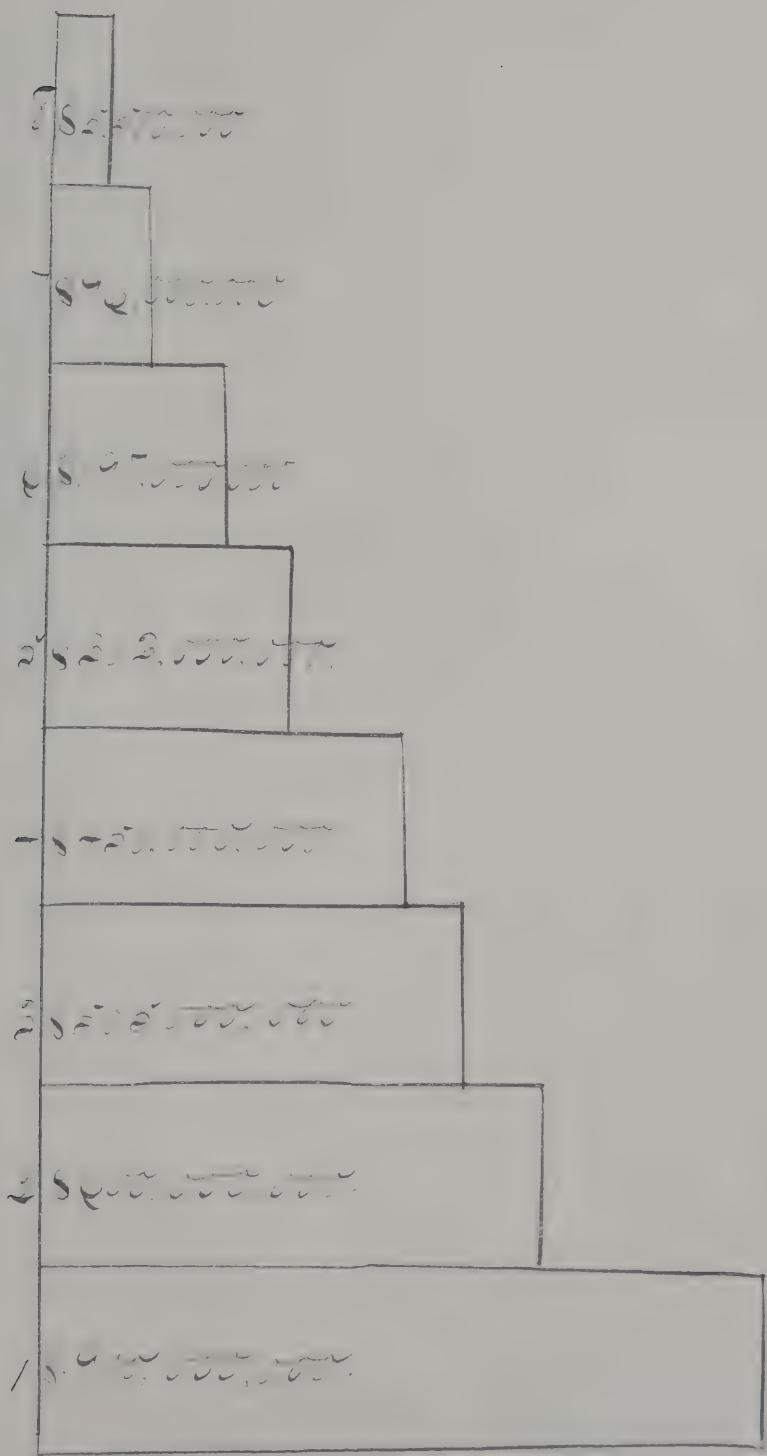
The articles needful are (3) (4) (5) (6) (7) & (8).

(1) and (2) are needless and harmful. Fifty-six million dollars more is spent for needless articles than for tobacco and liquor.

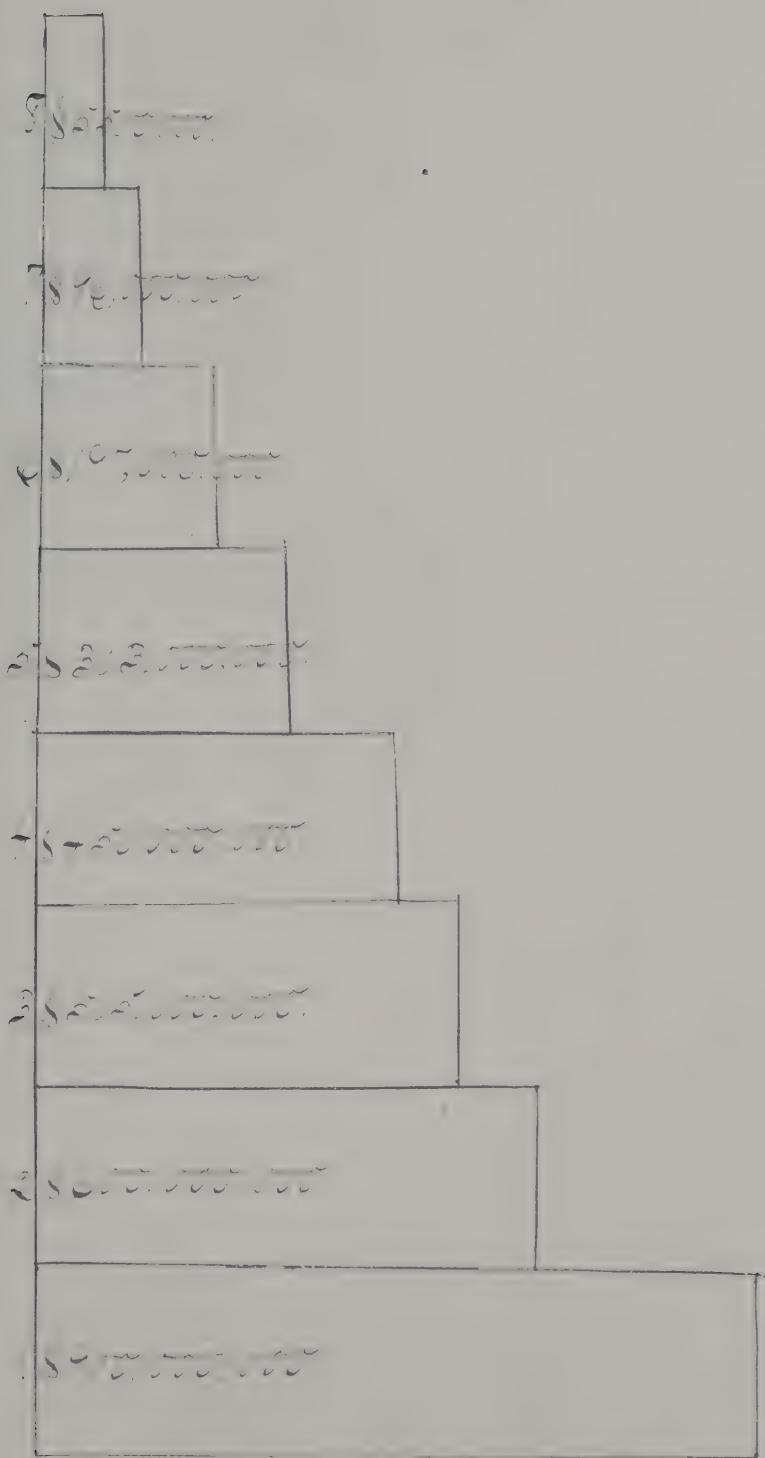
The result of this large waste of money is poverty.

Olara Surch











## Explanation of Diagram.

The purpose of the diagram is to show how much money is spent for tobacco and liquor and for the usual article.

It shows what the amount of money spent for liquor or tobacco is, bread, & other articles of food; what amount is spent for clothing, & for education, & for house and foreign articles.

All these articles are useful, except alcohol.

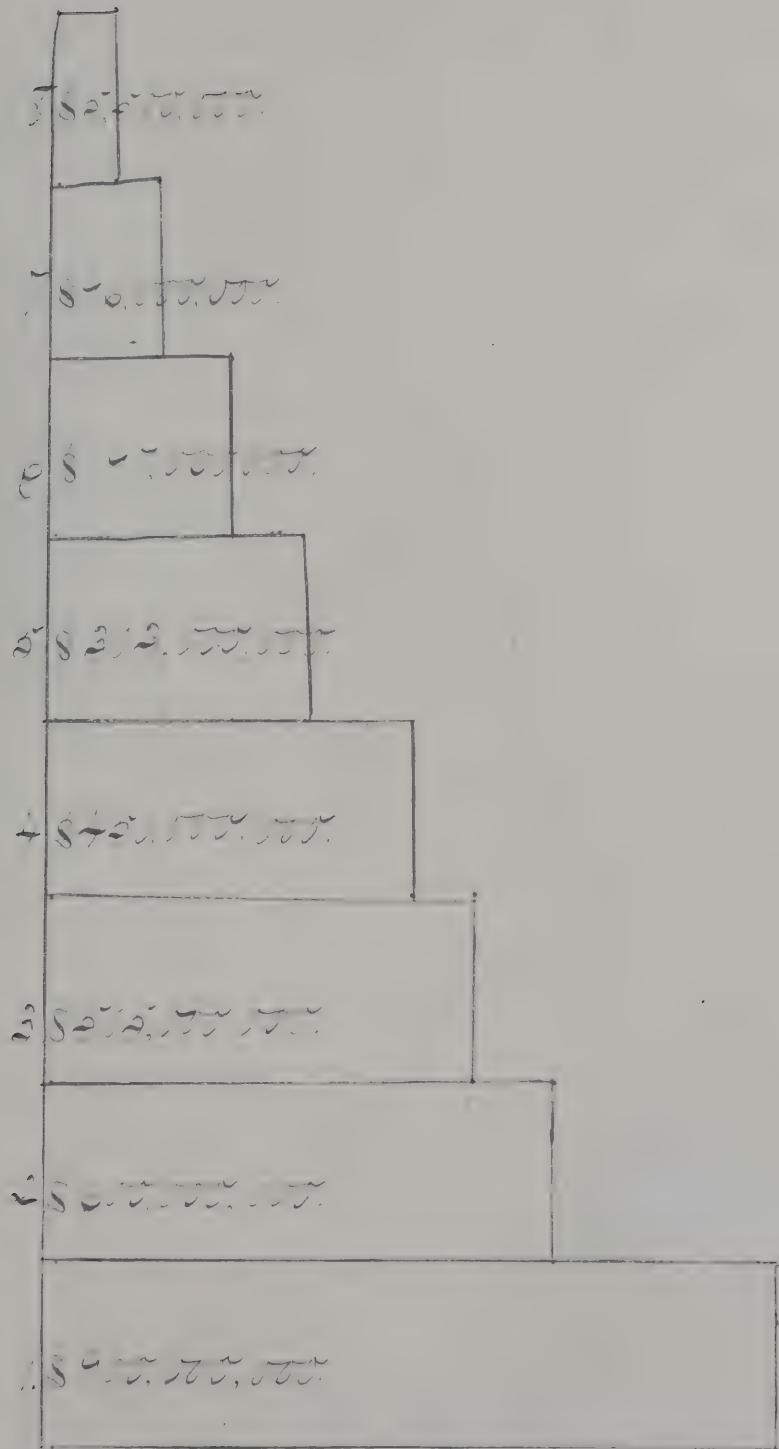
### Ward Ward's explanation.

About fifty six million dollars more is spent for alcohol.

The bulk of the large article of money is liquor.

Franklin H. Miller







and (1) and (2) are available



	\$5,000.00
7	\$4,000.00
6	\$1,500.00
5	\$2,000.00
4	\$7,000.00
3	\$2,000.00
2	\$1,000.00
1	\$1,000.00



## Explanation of the chart

The purpose of the diagram is to show how much money is spent for useful articles and for useless ones.

(1) presents the amount of money spent for liquor; (2) for tobacco; (3) for bread; (4) for cotton and wool; (5) for meat; (6) for boots and shoes; (7) for clothing; (8) for books and fragrances etc.

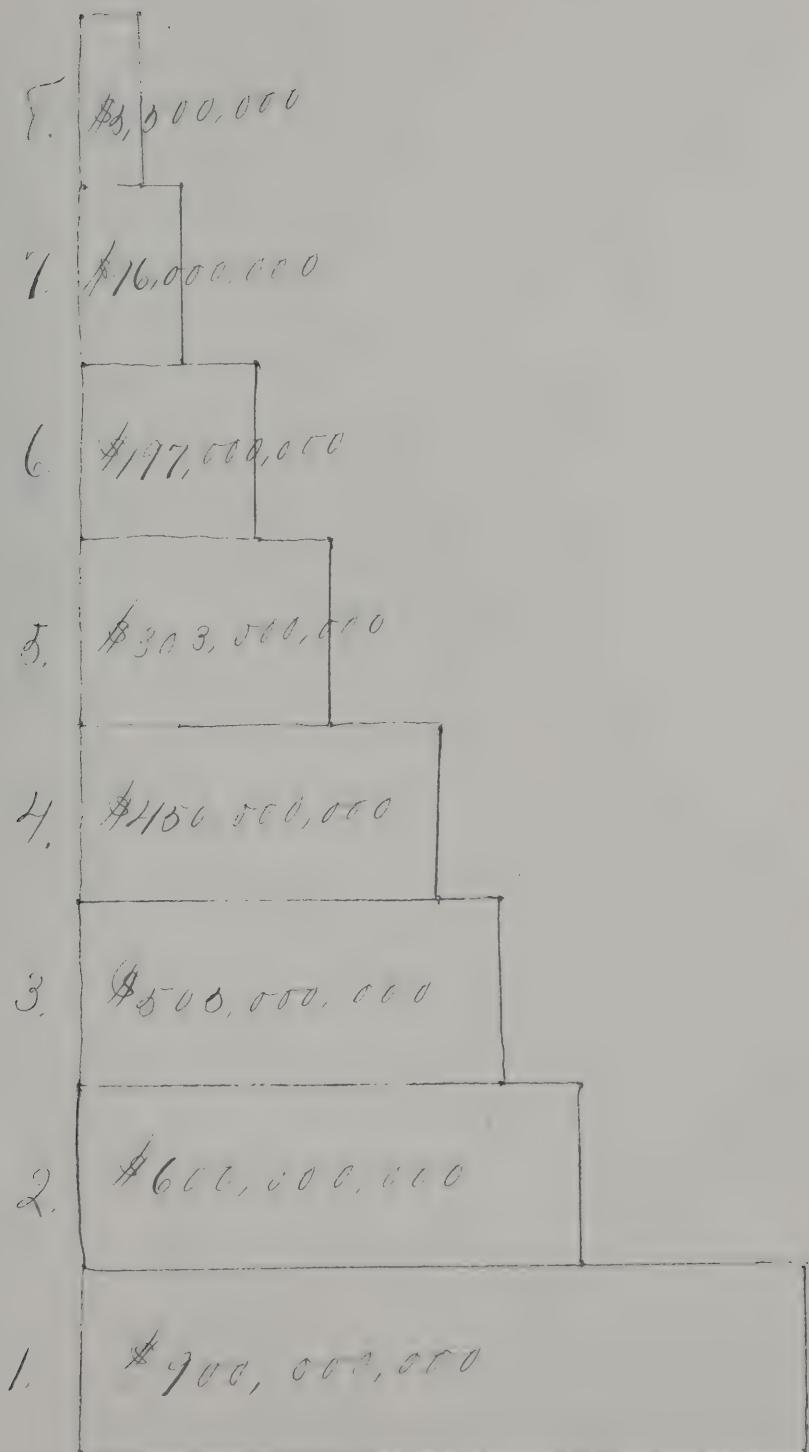
All of these are useful except (1) and (2).

(1) and (2) are useless

A fact often noticed here is that more is spent for useful articles than for useless ones. The result of this large sum of money is poverty.

Bad habit.







## Explanation of Diagram.

This diagram is to show the amount of money spent every year for liquor and tobacco, compared with what is spent for food and other necessities.

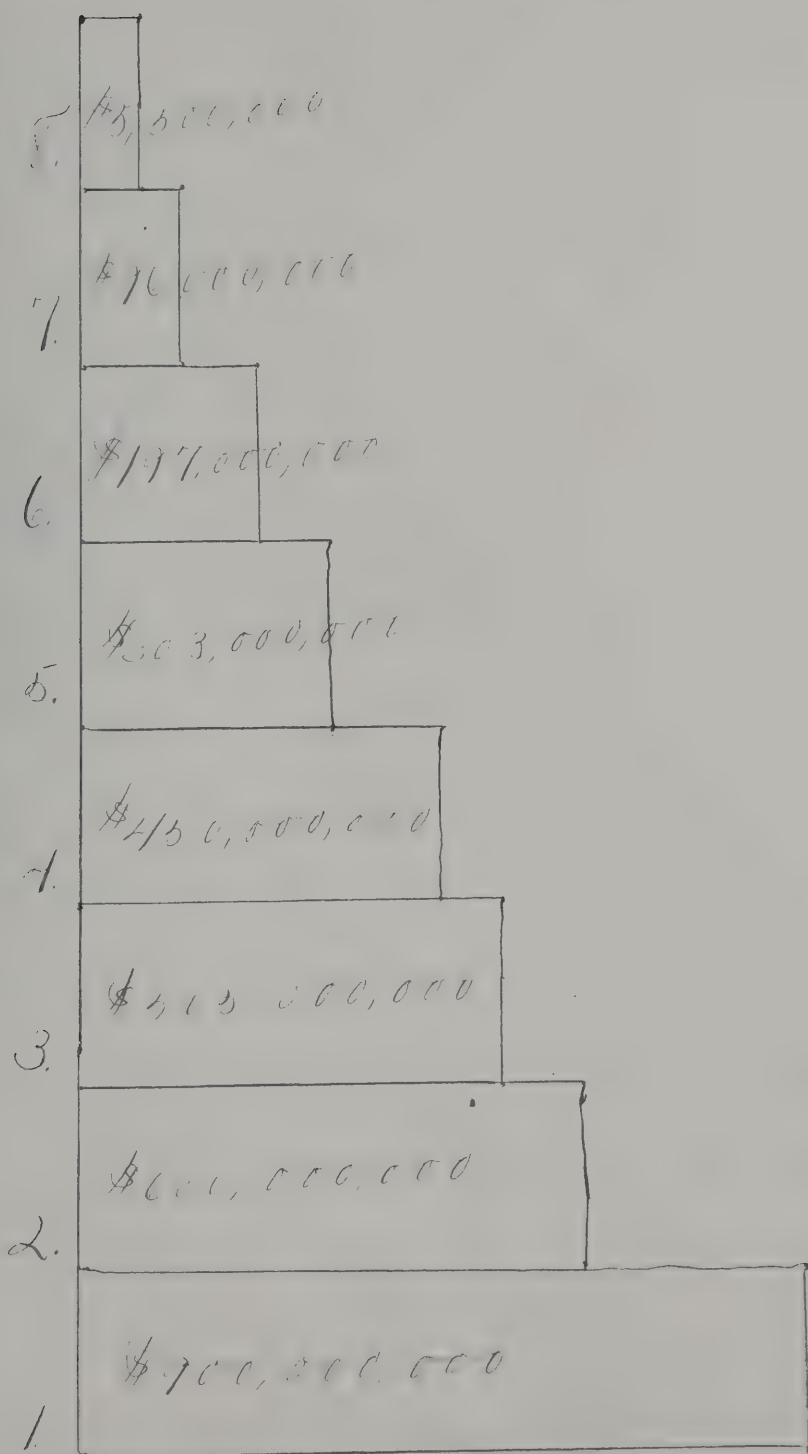
Number (1) shows the sum spent for liquor; (2) for tobacco; (3) for bread; (4) for cotton and woollen goods; (5) for meat; (6) for boots and shoes; (7) for public education; (8) for home and foreign missions.

The last six are useful and necessary, the first two unnecessary and harmful.

Only about \$56,000,000 more are spent for the necessary things than for tobacco and drinks.

The result of this waste of money is poverty, drunkenness, and crime.







## Exhibition of Expenses.

The diagram will show the amount of money spent every year for liquors and tobacco compared with what is spent for food and other necessities.

Number (1) shows the sum spent for tobacco, (2) for bread, (3) for cotton and woollen goods, (4) for meals, (5) for books and shoes, (6) for public education, and (8) for home and foreign missions.

The last six are useful and necessary, the first two are unnecessary and harmful.

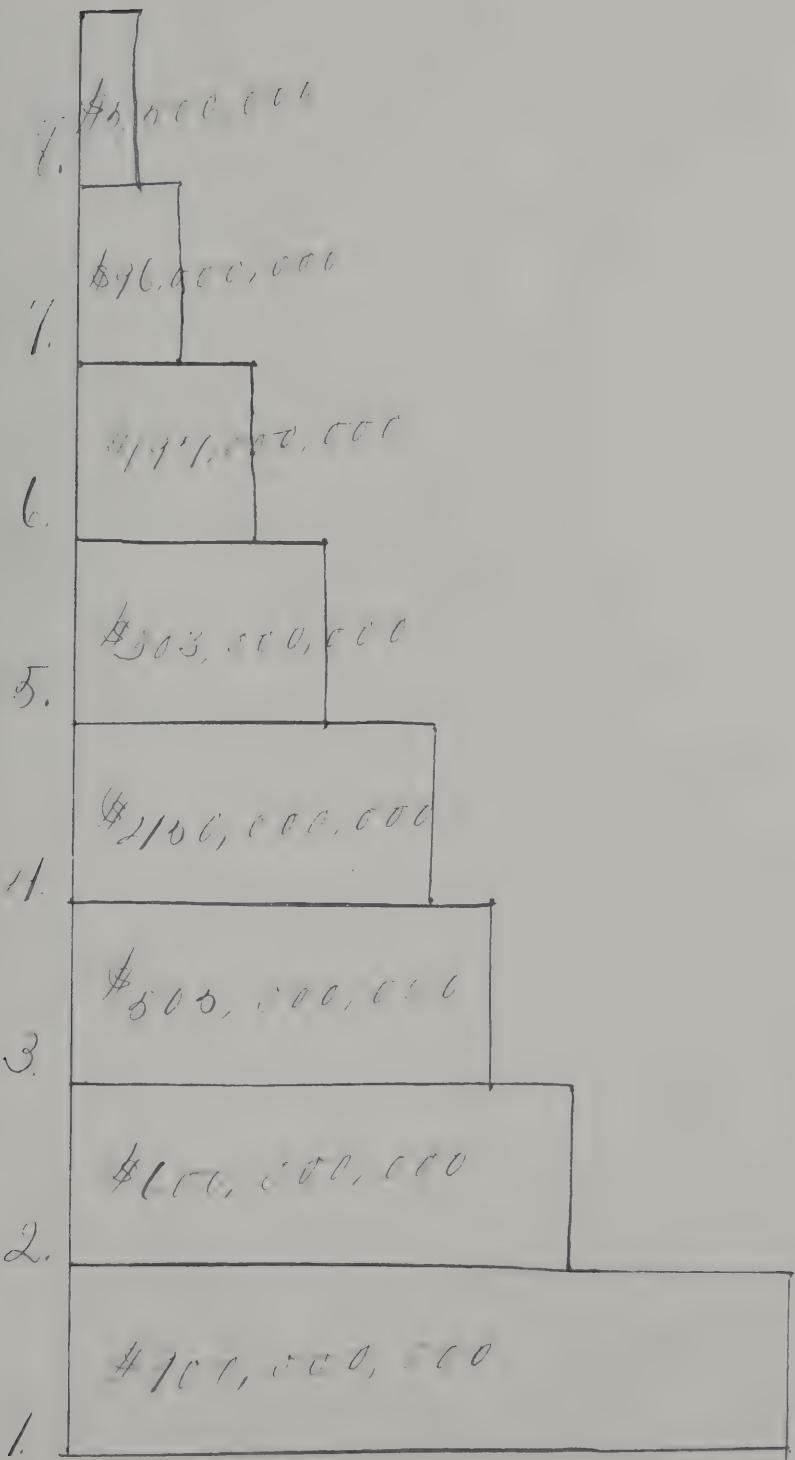
But, about \$56,000,000 more are spent for the necessary things than for tobacco and drink.

The result of this waste of money is, probably drunkenness,











## Chronic Town of Leagrand

This diagram is to show the amount of money spent every year for the use of tobacco, compared with what is spent for bread and other necessaries.

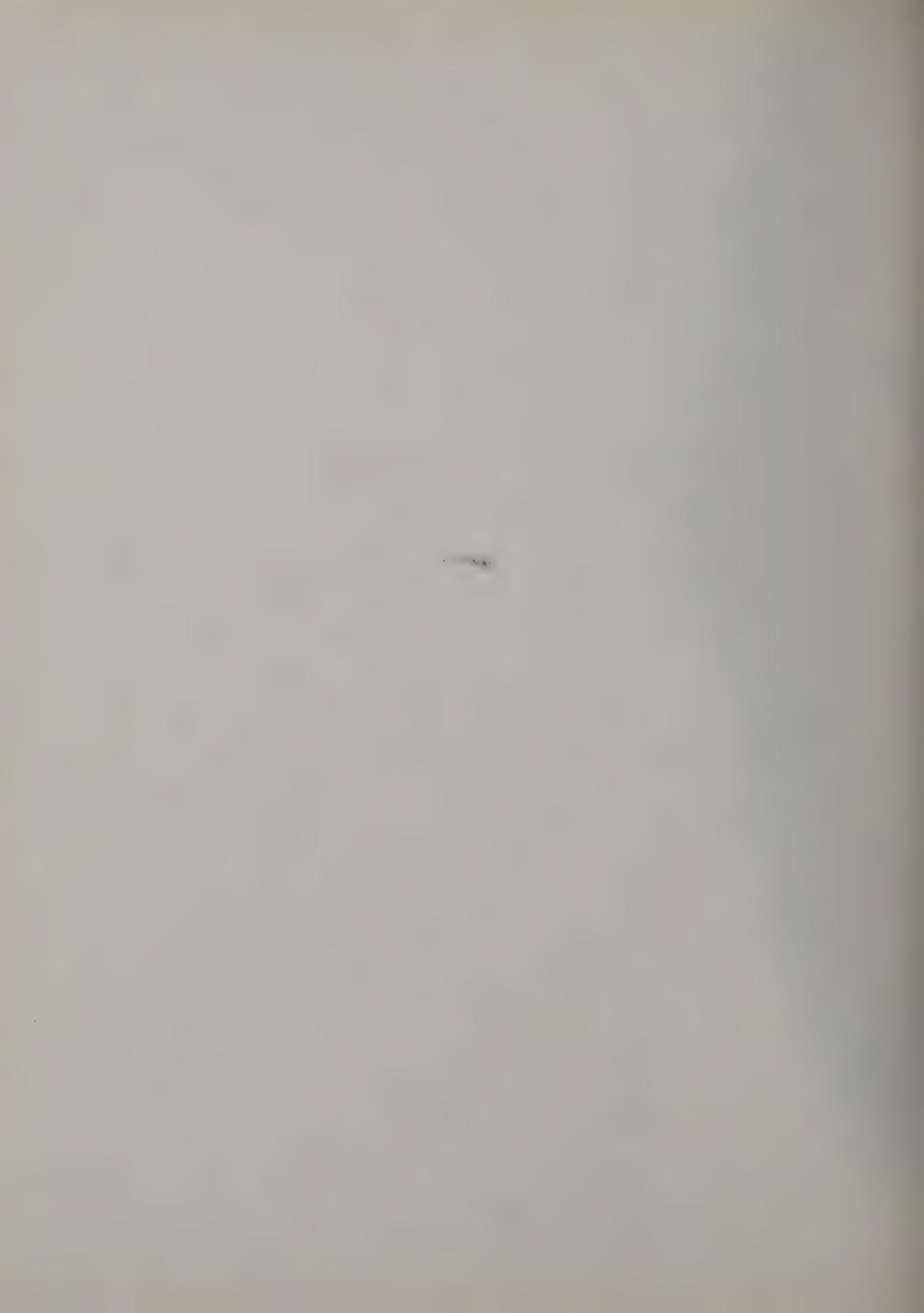
Number (1) shows the sum of cost for liquor; (2) for tobacco; (3) for bread; (4) cotton and cotton goods; (5) food meat; (6) for cloths and shoes; (7) for public educations; and (8) for home and foreign missions. The last six are trifles, at necessary, the first two are necessary necessities.

Only about \$56,000,000 more are spent for the necessities of living than for tobacco and drink.

The result of this waste of money is to add to human misery and crime.



8.	\$1,516,150
7.	\$16,550,000
6.	\$17,000,000
5.	\$203,00,000
4.	\$430,100,000
3.	\$500,000,000
2.	\$600,000,000
1.	\$700,000,000



## Explanation of Diagram

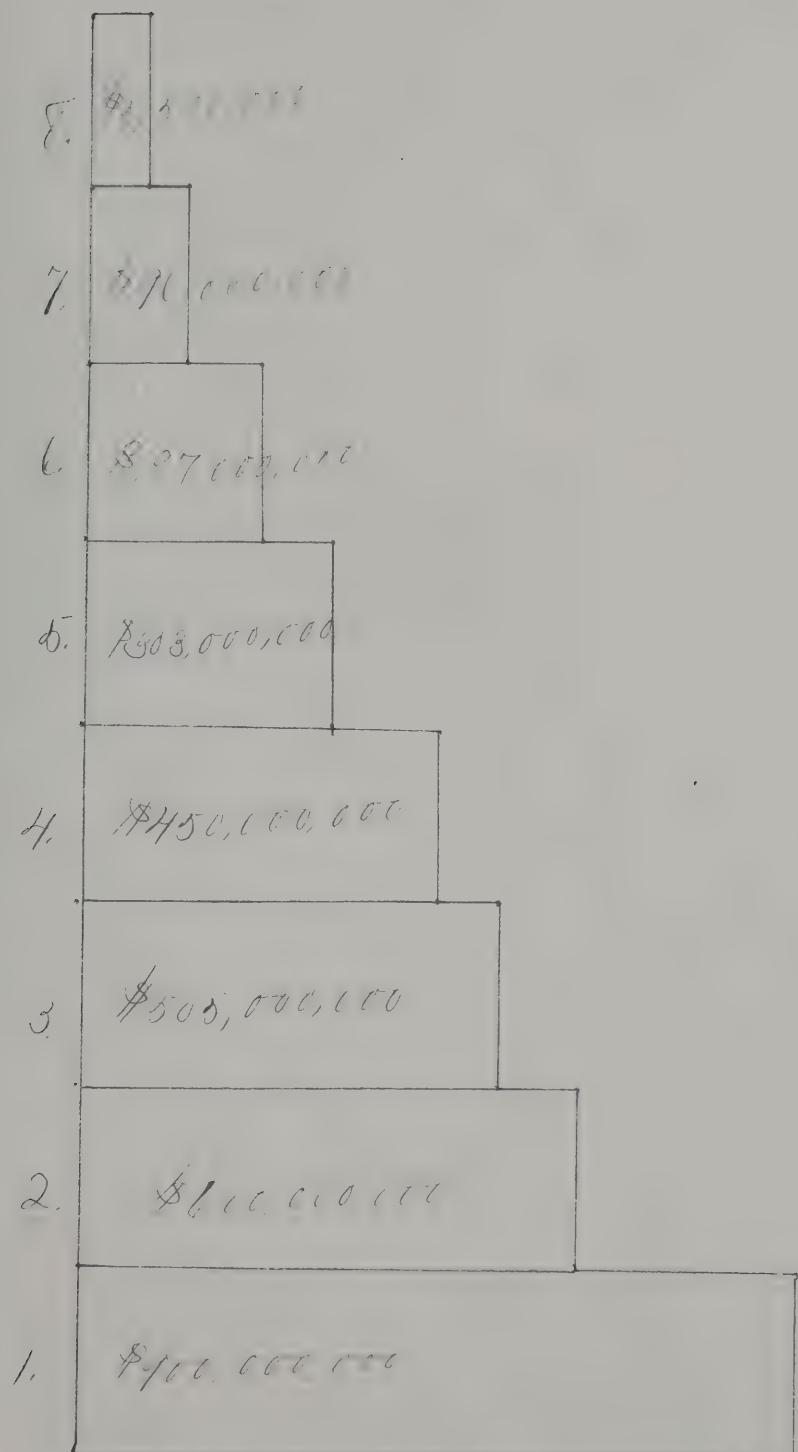
This diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessities.

Number 01 shows the sum spent for liquor  
(2) for tobacco (3) bread (4) for cotton and  
woollen goods (5) for meat (6) for boots and shoes  
(7) for public education & for home and foreign  
missions.

Only about \$56,000,000 more are spent  
for the necessary things than for (the)  
tobacco and liquor.

The result of this waste of money is poverty,  
drunkenness, and crime.







## Explanation of Diagram

This diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessities.

Number (1) shows the sum spent for liquors; (2) for tobacco; (3) for bread; (4) for cotton and woollen goods; (5) for meat; (6) for boots and shoes; (7) for publicized education; (8) for home and foreign missions.

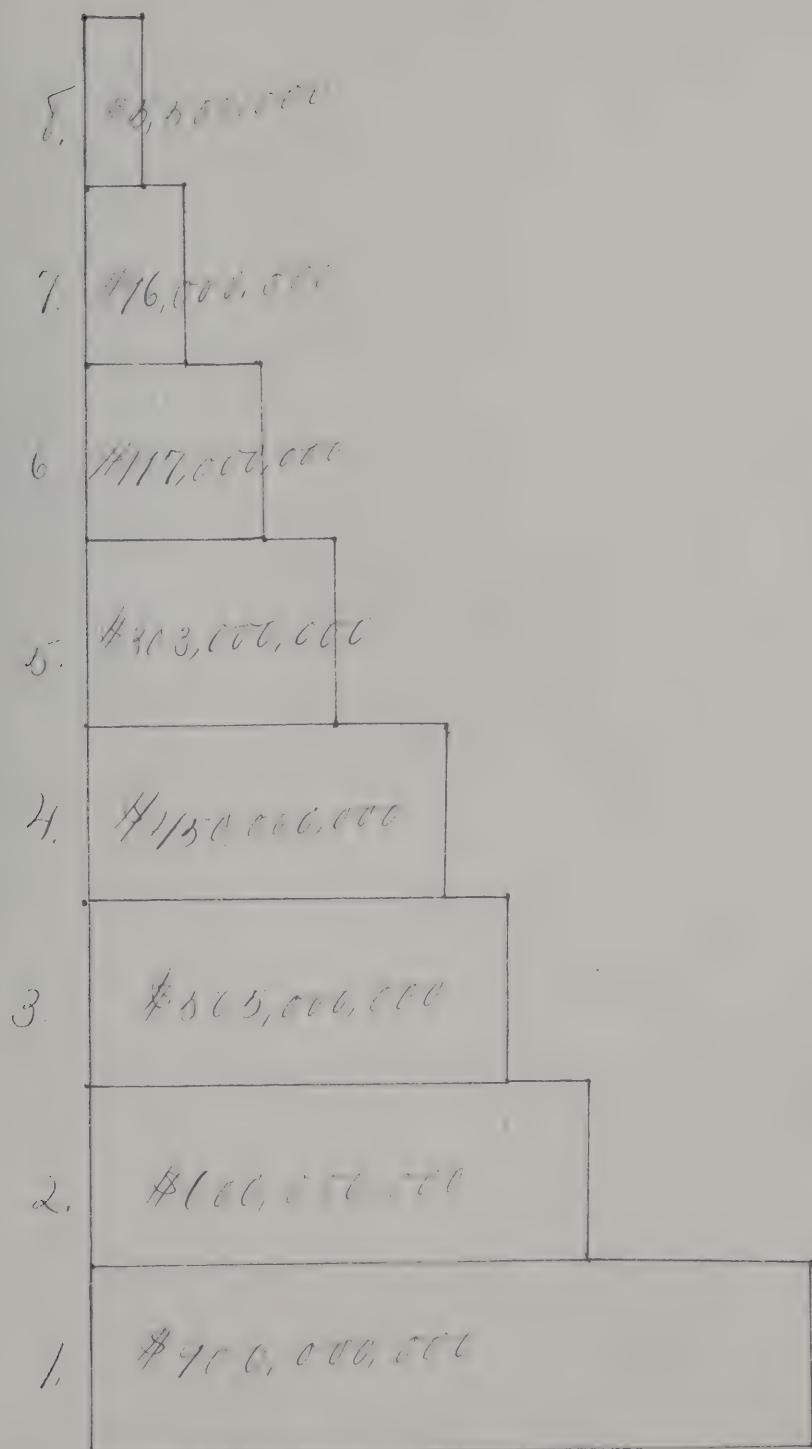
The last six are useful and necessary, the first two are necessary and harmful.

Only about \$6,000,000 more are spent for the necessary things than for tobacco and drink.



The result of this waste of  
money is poverty, drunken-  
ness, and crime.







## Estimated Cost of Living.

The us diagram is to show  
the amount of money spent  
every for liquors and  
tobacco, compared with  
what is spent for food and  
other necessaries.

Numbers show the sum  
spent for liquor; (2) for  
tobacco; (3) for bread; (4) for  
cotton and woolen stock;  
(5) for meat; (6) for boots and  
shoes; (7) for public education;  
and (8) for home and foreign  
missions.

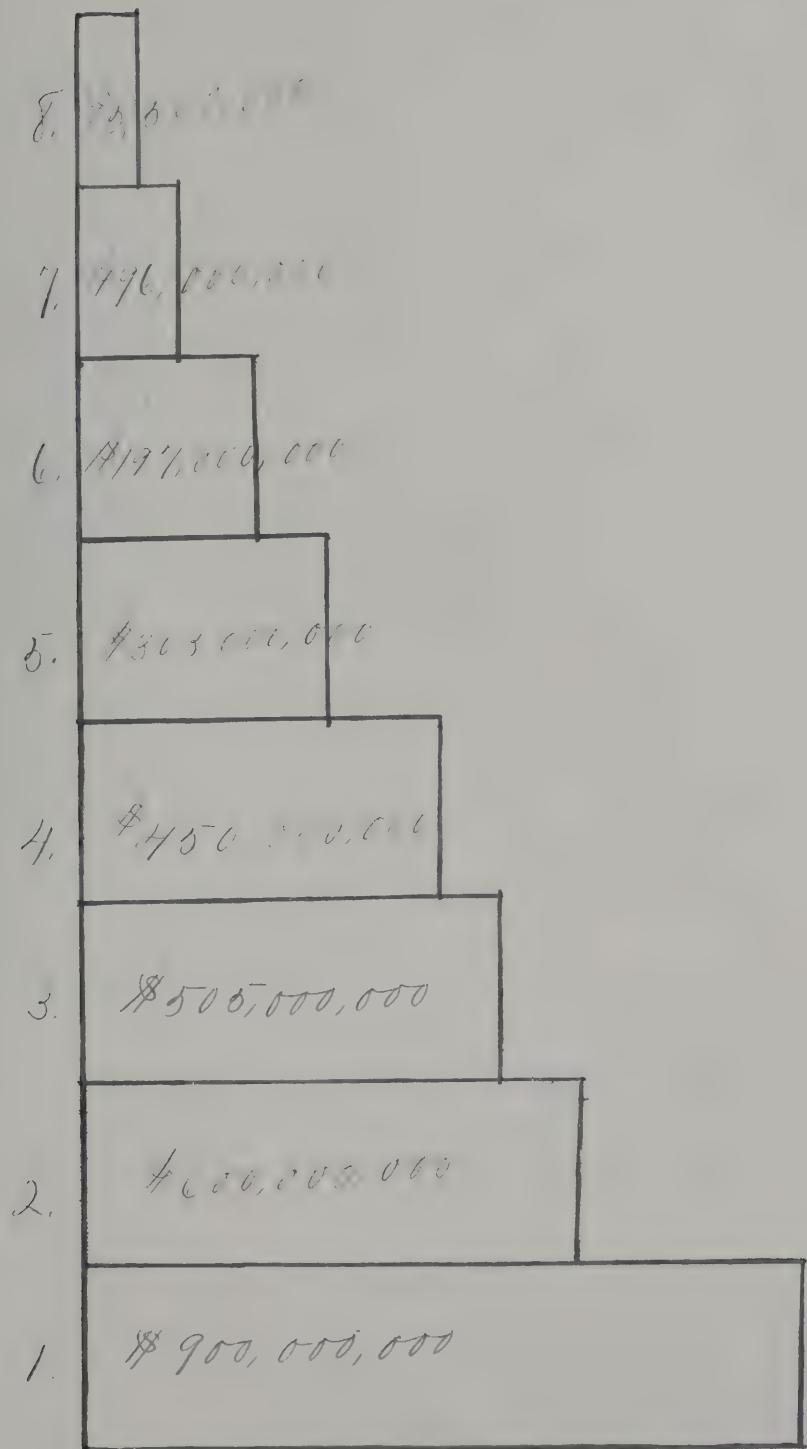
The last six are useful and  
necessary, the first two are  
necessarily evil and harmful.

Only about 20,000,000 are  
spent for the necessary things.  
None for tobacco and liquor.



The muscle of the middle of  
M. rectus is poorly developed -  
mass, and is small.



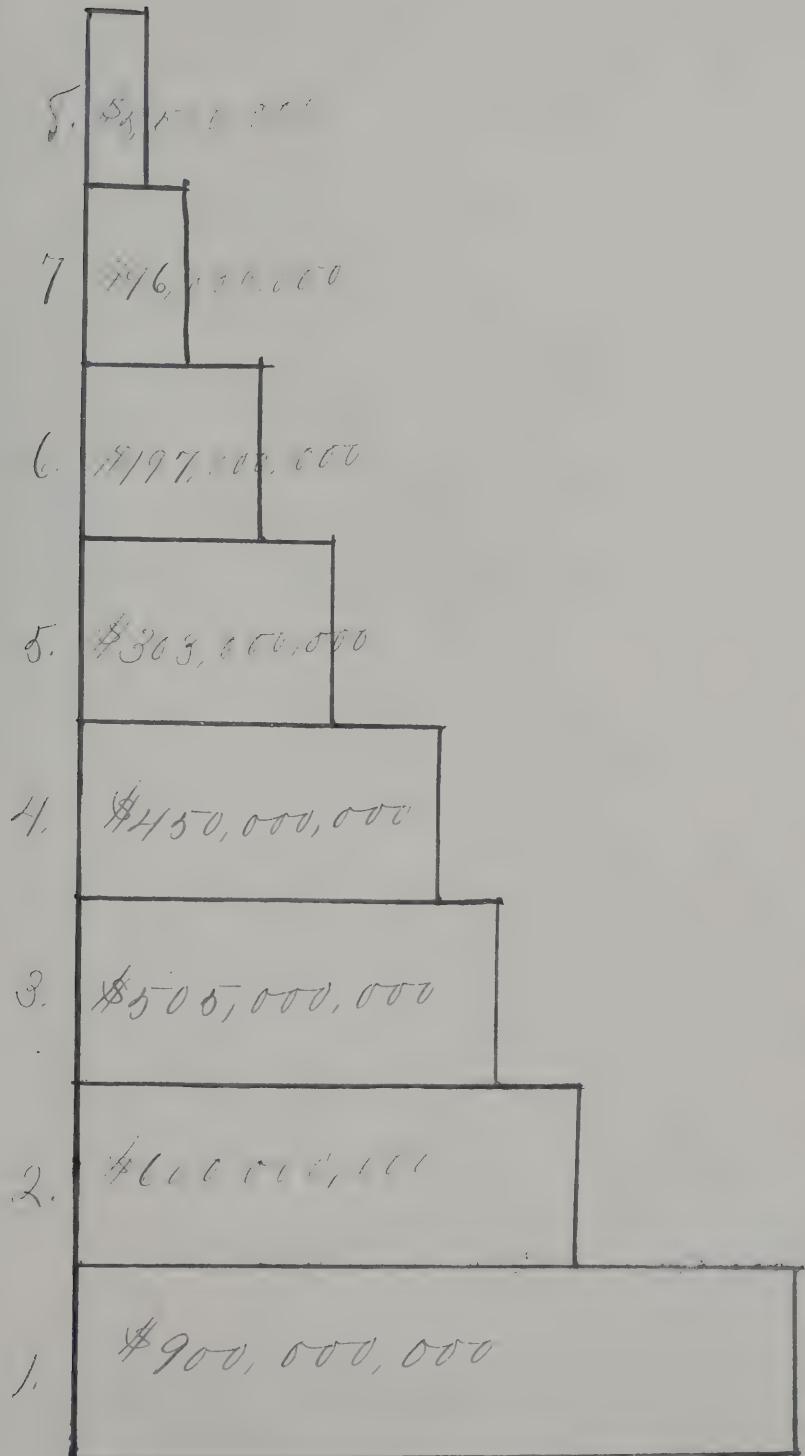




Explanation of Diagram  
The diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessities. Number (1) shows the sum spent for (1) liquors, (2) for tobacco, (3) for tea and (4) for cotton and woollen goods, (5) for meat, (6) for fruits, and (7) for vegetables; and (8) for home and foreign missions. The last six are useful and necessary, the first two unnecessary and harmful.

Only about  $\frac{1}{6}$  or  $\frac{1}{7}$  more is spent for the necessities than for tobacco and drink. The result of this waste of money is poverty, drunkenness and crime.







## Explanation of Diagram.

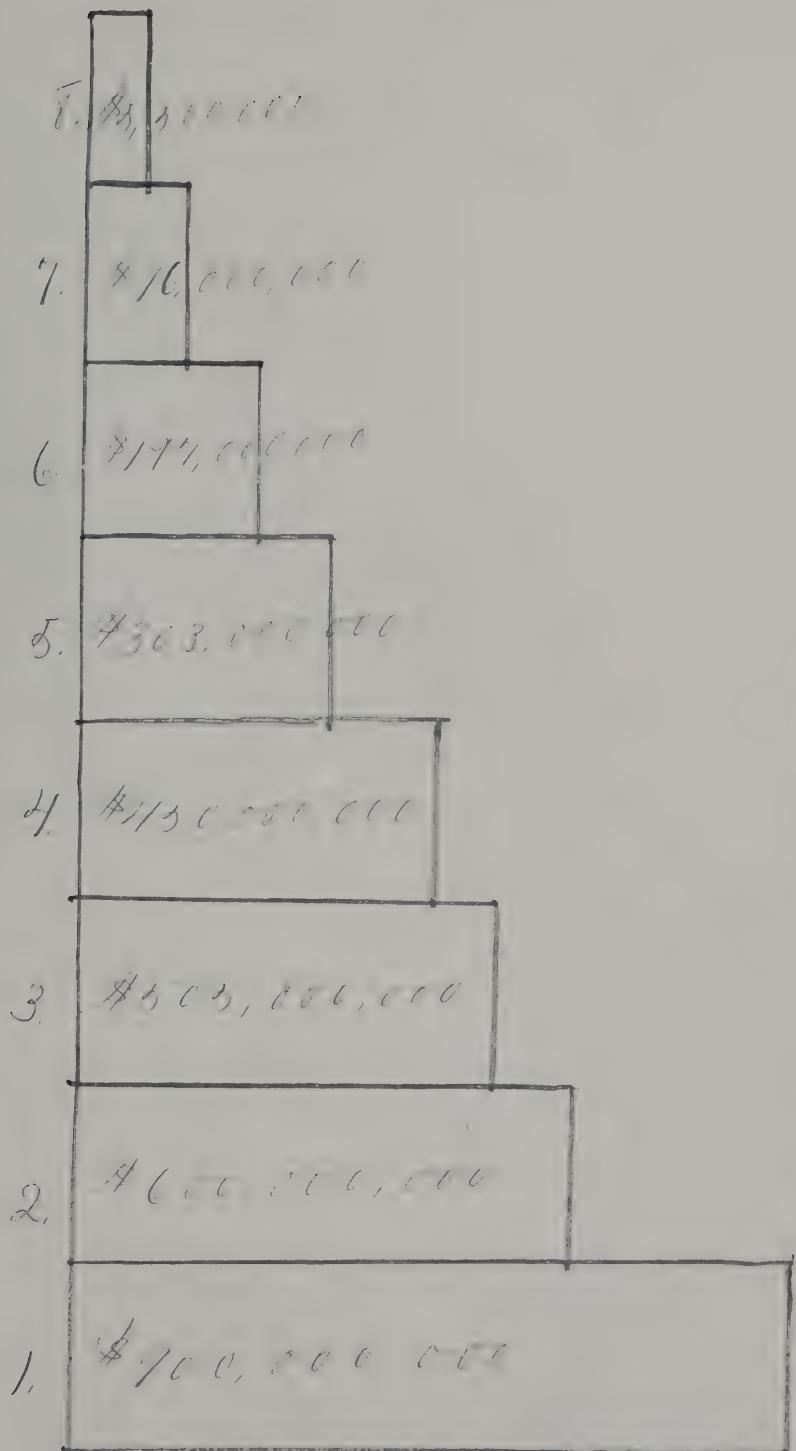
This diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessities.

Number (1) shows how much is spent for liquor; (2) for tobacco; (3) for bread; (4) for cotton and woolen goods; (5) for meat; (6) for books and school; (7) for public education; (8) for home and foreign missions.

The last six are useful and necessary, the first two unnecessary and harmful.

Only about \$6,500,000 more are spent for necessary things than for tobacco and drink. The result of this waste of money is poverty, drunkenness, and crime.







## Examination of Layman.

This layman is to account for a sum of money I spent every year for tobacco and tobacco combined with what is spent for beer and other beverages.

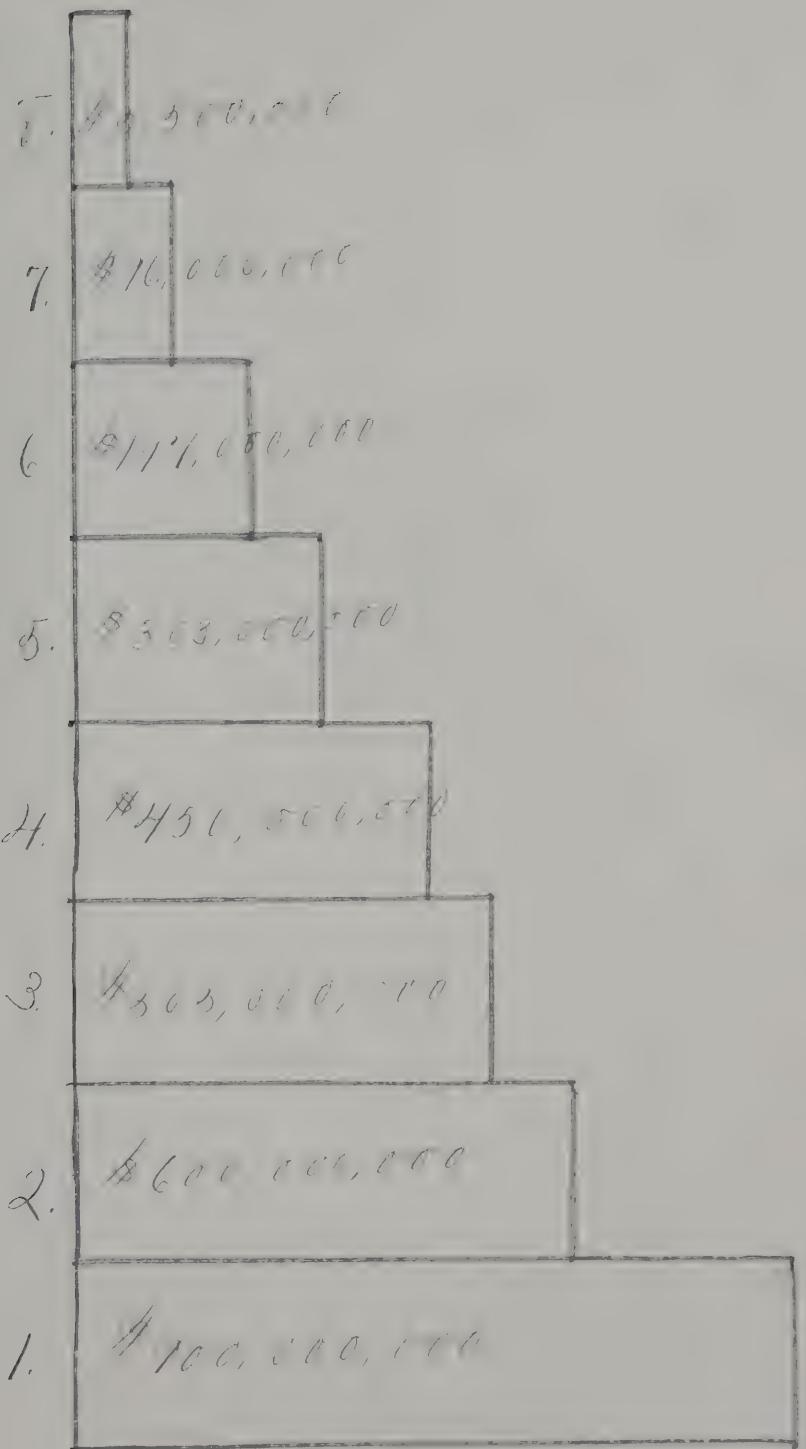
Number 6) should this amount be  
for liquor; (2) for tobacco; (3) for meat; (4)  
for cotton and woolen goods; (5) for  
meat; (6) for boots and shoes; (7) for public  
education; (8) for home and foreign  
missions.

The last six are useful and necessary,  
the first two unnecessary and bad.

Only about \$56,000,000 more are  
spent for the necessary things  
than for tobacco and drink.

The result of this waste of  
money is poverty, drunkenness,  
and crime.







## Explanation of Diagram

The diagram is to show the amount of money spent every year for liquors and tobacco, &c., in ratio with what is spent food and other necessaries.

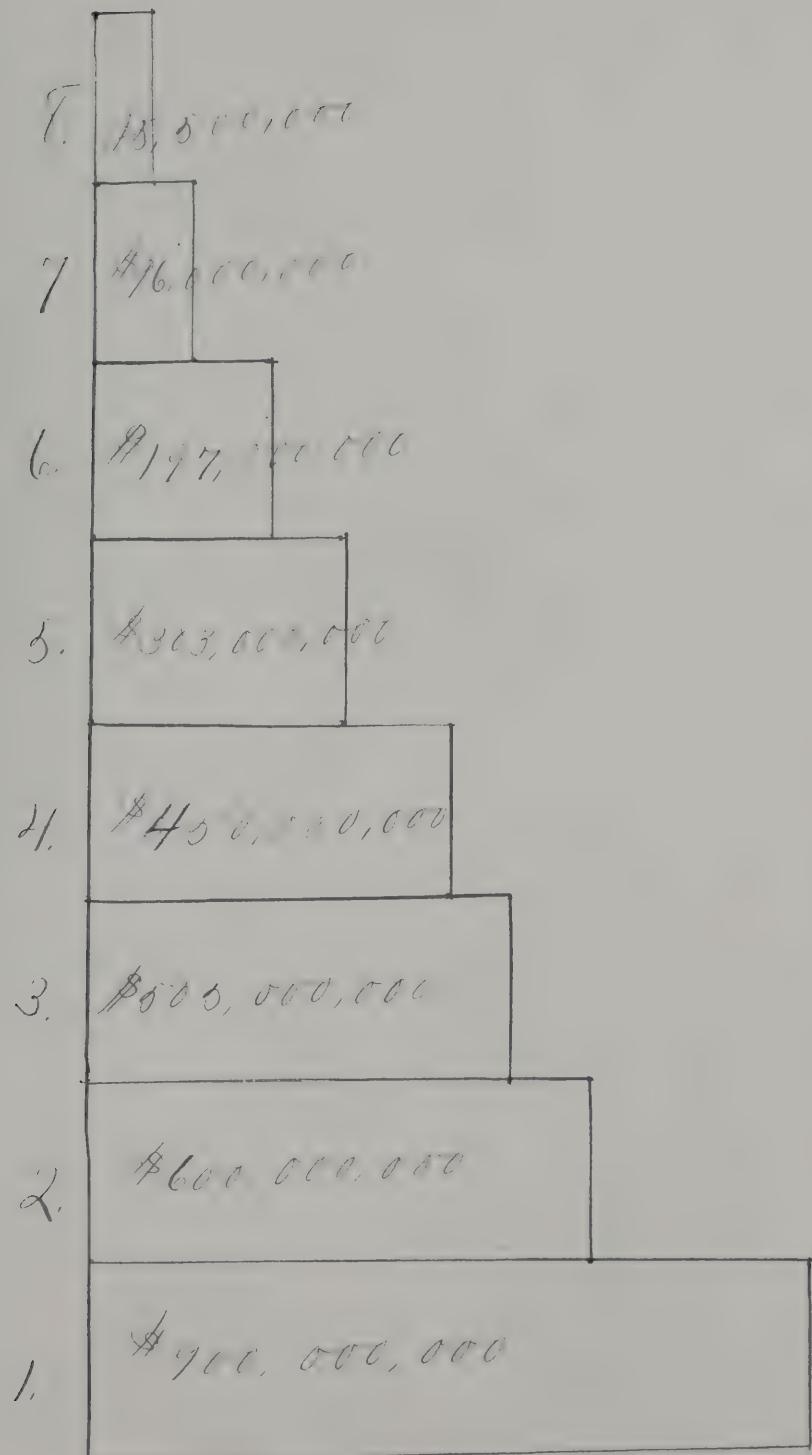
Number 1 shows the sum spent for liquor, (2) for tobacco, (3) for bread, (4) for cotton and woollen goods, (5) for meat, (6) for boots and shoes, (7) for public education, (8) for home and foreign missions,

The last six are useful and necessary, the two are unnecessary and hurtful.

Only about \$5,500,000 more are spent for the necessary things than for tobacco and drink.

The result of this waste of money is poverty, drunkenness, & crimes.







## Explanation of Diagram.

This diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessaries.

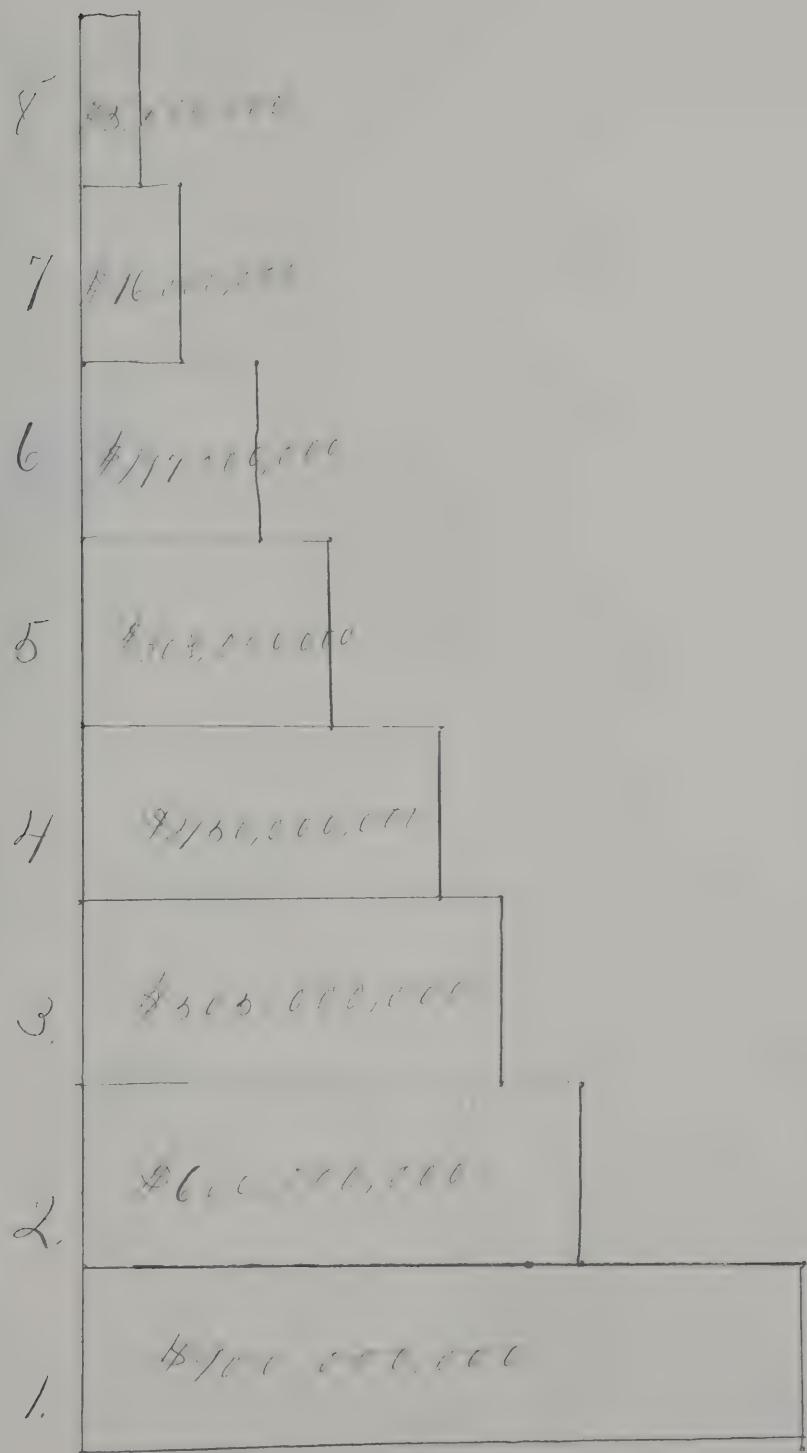
Number (1) shows the sum spent for liquors; (2) for tobacco; (3) for bread; (4) for cotton and woollen goods; (5) for meat; (6) for boots and shoes; (7) for public education; (8) for home and foreign missions.

The last six are useful and necessary, the first two unnecessary and harmful.

Only about \$6,000,000 more are spent for the necessary things than for tobacco and drink.

The result of this waste of money is poverty, drunkenness, and crime.







## Explanation of Diagram.

This diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessaries.

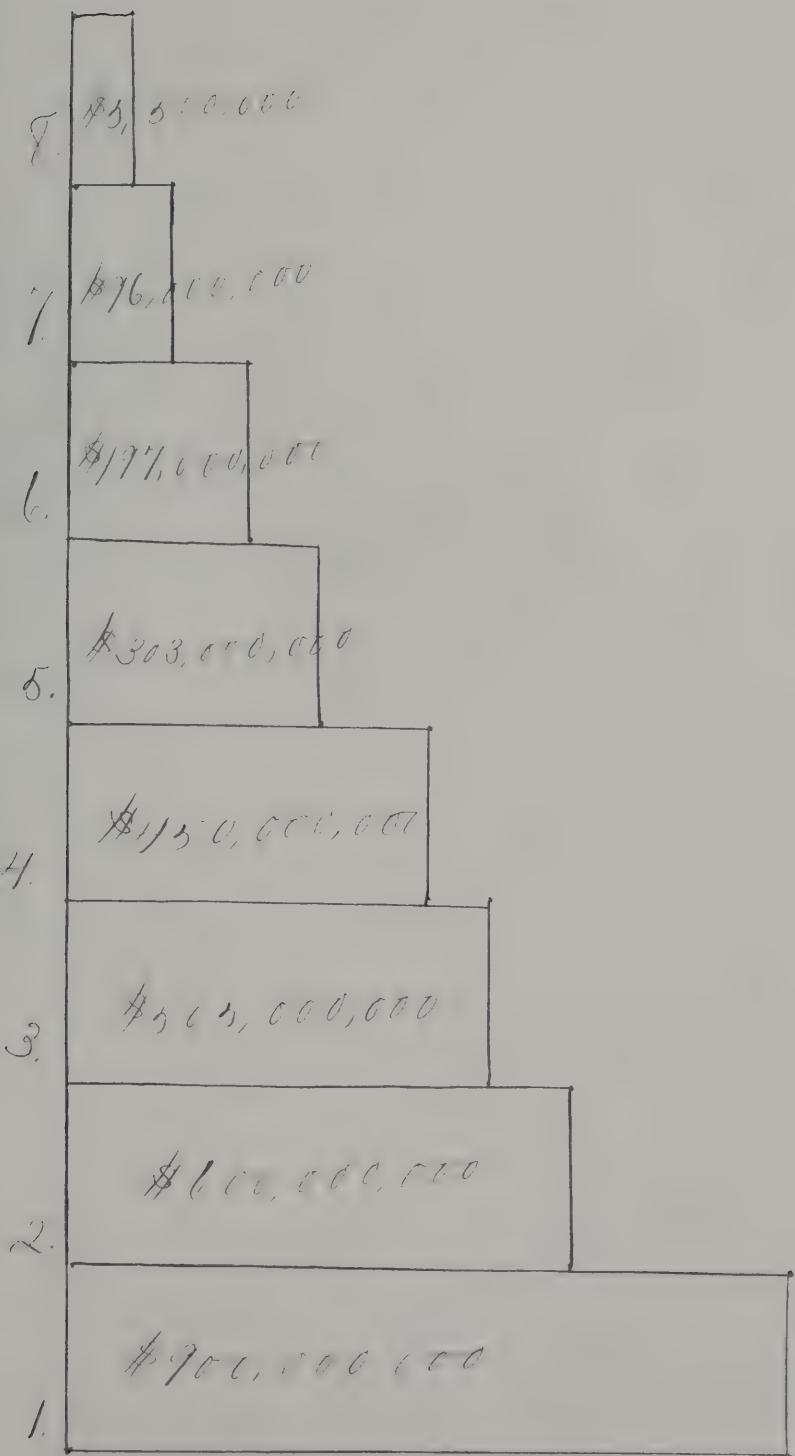
Number (1) shows the sum spent for liquor; (2) for tobacco; (3) for bread; (4) for cotton and woolen goods; (5) for meat; (6) for boots and shoes; (7) for public education; (8) for home and foreign missions.

The last six are useful and necessary, the first two unnecessary and harmful.

Only about \$5,000,000 more are spent for the necessary things than for tobacco and drink.

The result of this waste of money is poverty, drunkenness, and crime.





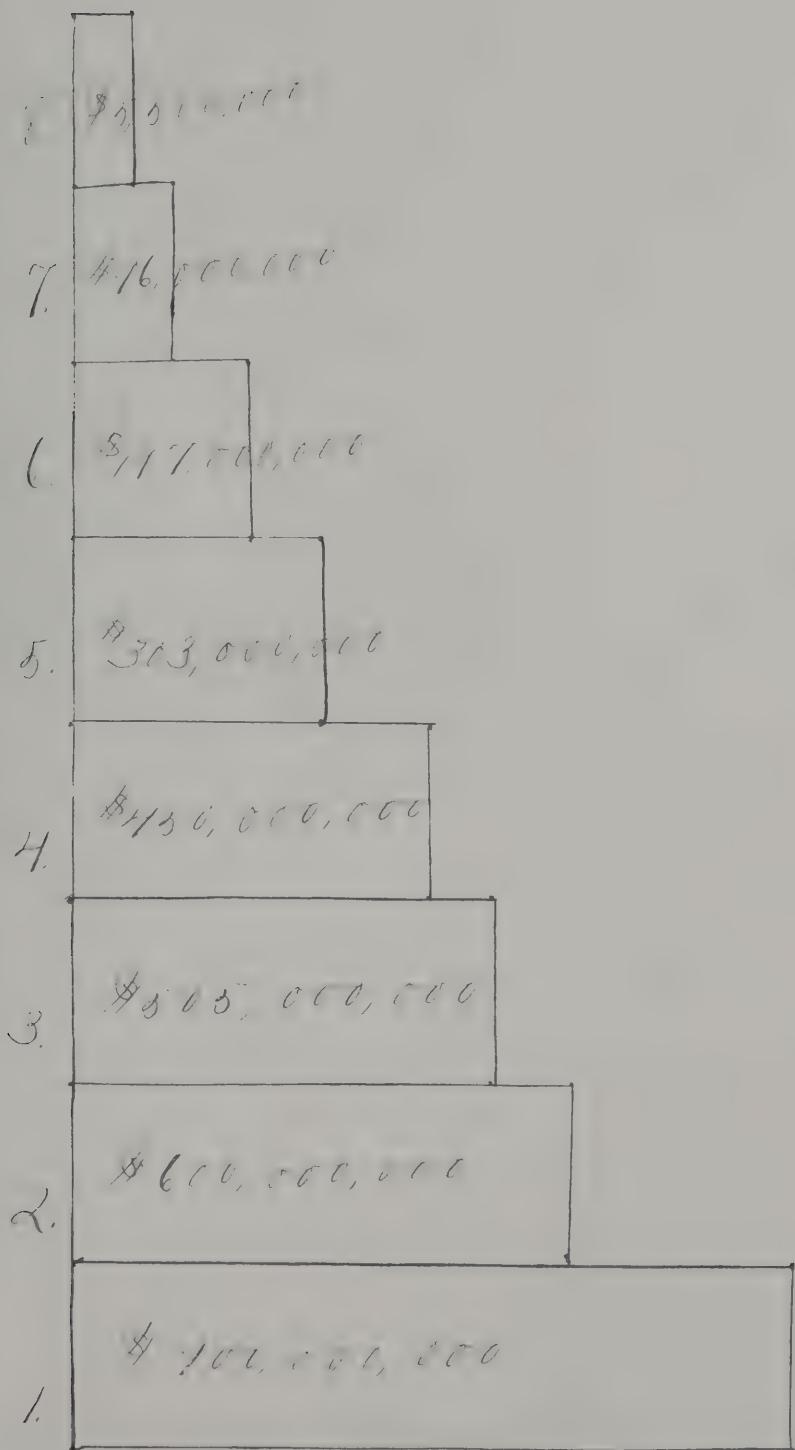


## Explanation of Diagram.

This diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessities. Number (1) shows the sum spent for liquor; (2) for tobacco; (3) for bread; (4) for cotton and woolen goods; (5) for meat; (6) for boots and shoes; (7) for public education; and (8) for home and foreign missions. The last six are useful and necessary, the first two unnecessary and harmful. Only about \$6,000,000 more are spent for the necessary things than for tobacco and drink.

The result of this waste of money is poverty, drunkenness, and crime







Explanation of Budget  
The budget is to show  
the amount of money spent  
every year for liquors and  
tobacco, compared with what  
is spent for food and  
other necessaries.

Number (1) shows the sum  
spent for liquor, (2) for  
tobacco; (3) for bread; (4) for  
cotton and woollen goods;  
(5) for neat; (6) for books and  
shoes; (7) for public educa-  
tion; (8) for home and  
foreign missions.

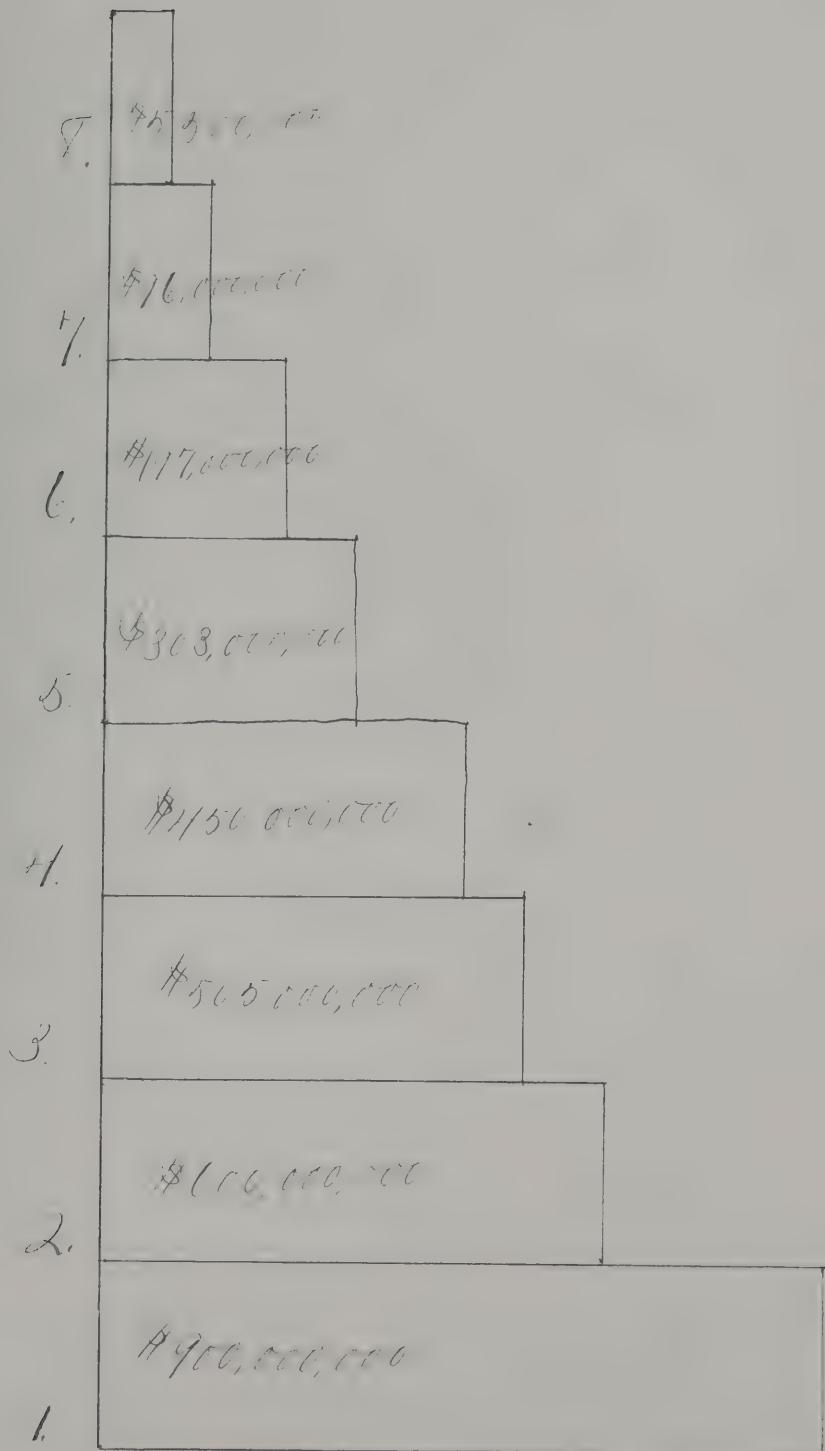
The last six are useful  
and necessary, the first  
two unnecessary and  
harmful.

Only about 56,000,000 now  
are spent for the necessary



things than for tobacco  
and drink. The result  
of this waste of money  
is poverty, drunkenness,  
and crime.







## Explanation of Diagram.

This diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessities.

Number (1) shows the sum spent for liquors; (2) for tobacco; (3) for bread; (4) for cotton and woollen goods; (5) for meat; (6) for boots and shoes; (7) for public education; (8) for home and foreign missions.

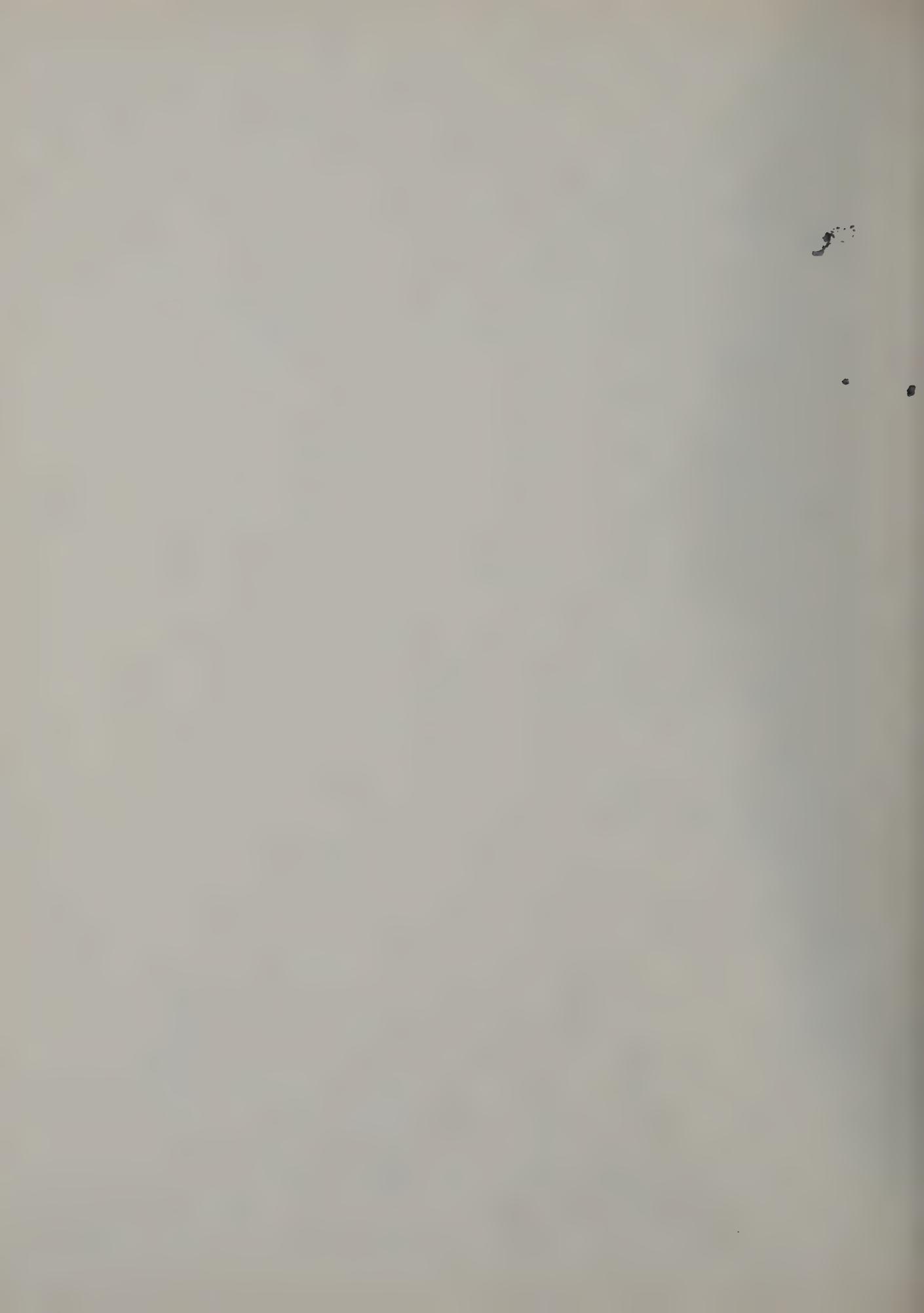
The last six are useful and necessary, the first two unnecessary and harmful.

Only about \$56,000,000 more are spent for the necessary things than for tobacco and drink.

The result of this waste of money is poverty, drunkenness, and crime.



8.	\$5,500,000
7.	\$96,000,000
6.	\$196,000,000
5.	\$303,000,000
4.	\$450,000,000
3.	\$505,000,000
2.	\$600,000,000
1.	\$900,000,000



## Explanation of Diagram.

This diagram is to show the amount of money spent every year for liquors and tobacco compared with what is spent for food and other necessities.

Diagram (1) shows the sum spent for liquor (2) for tobacco; (3) for bread; (4) for cotton and woollen goods; (5) for meat; (6) for foot and shoes; (7) for public education; and (8) for home and foreign missions.

The last six are useful and necessary, the first two are unnecessary and harmful.

Only about \$66,000,000 more are spent for the necessary things than for tobacco and



drink. The result of his  
waste of money is poverty,  
drunkenness and crime.



8.	\$835,000
7.	\$90,000,000
6.	\$175,000,000
5.	\$303,000,000
4.	\$450,000,000
3.	\$505,000,000
2.	\$600,000,000
1.	\$100,000,000



## Explanation of Diagram

This diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessities.

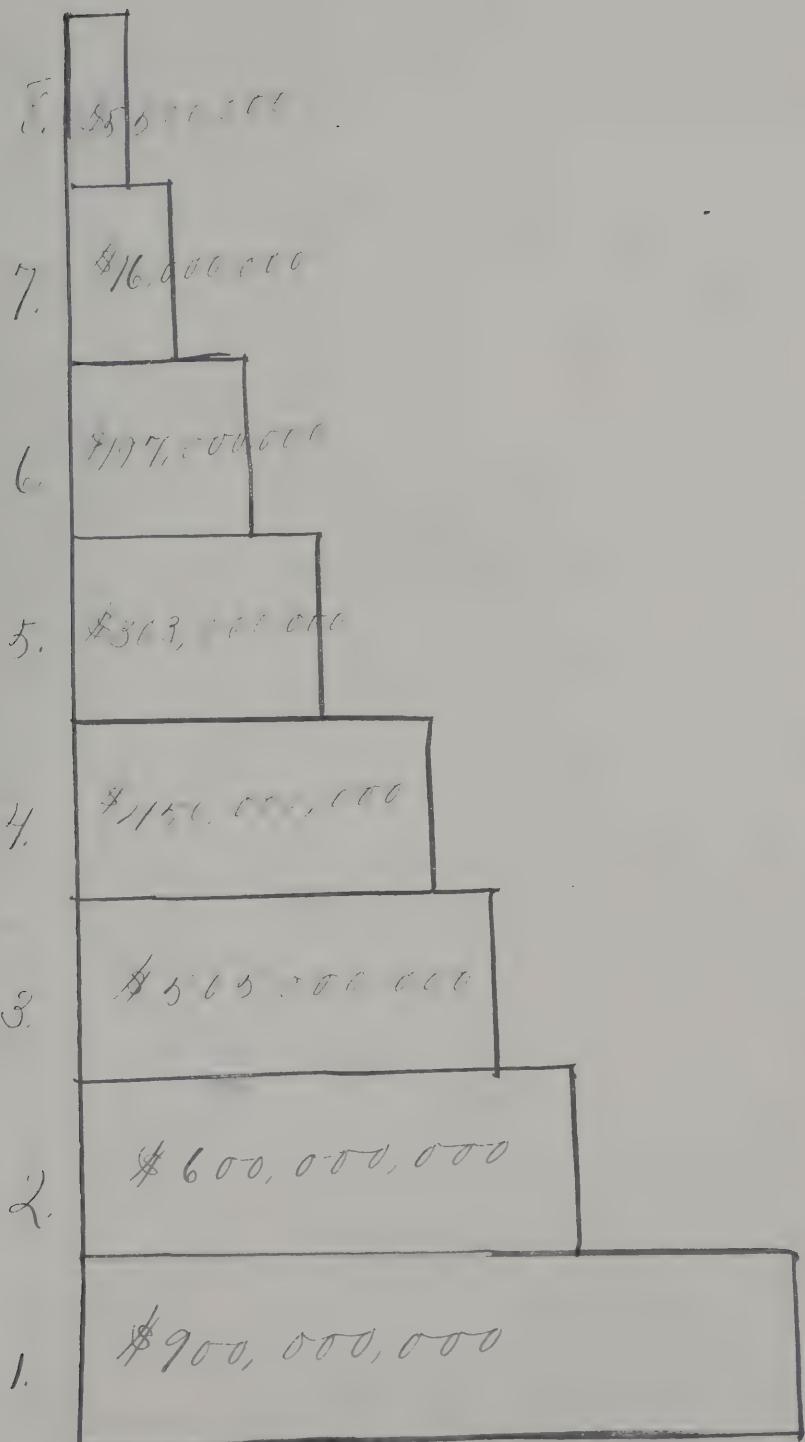
Number 1 shows the sum spent for liquor (2) for tobacco (3) for bread, (4) for cotton and woolen goods, (5) for meat, (6) for boots and shoes, (7) for public education, and (8) for home and foreign missions.

The last six are useful and necessary, the first two unnecessary and harmful.

Only about \$75,000 more is spent for the necessary things than for tobacco and drinks.

The result of this wasteful money is poverty, drunkenness, and vice.







## Explanation of Diagram

This diagram is to show the amount of money spent every year for liquors and tobacco, compared with what is spent for food and other necessities.

Number (1) shows the sum spent for liquors, (2) for tobacco, (3) for bread, (4) for cotton and woolen goods, (5) for meat, (6) for books and shoes, (7) for public education, (8) for home and foreign missions.

The last six are useful and necessary, the first two unnecessary and harmful.

Only about \$6,000,000 more are spent for the necessary things than for tobacco and drink. The result of this waste of



money is poverty-drunkenness  
and crime.

